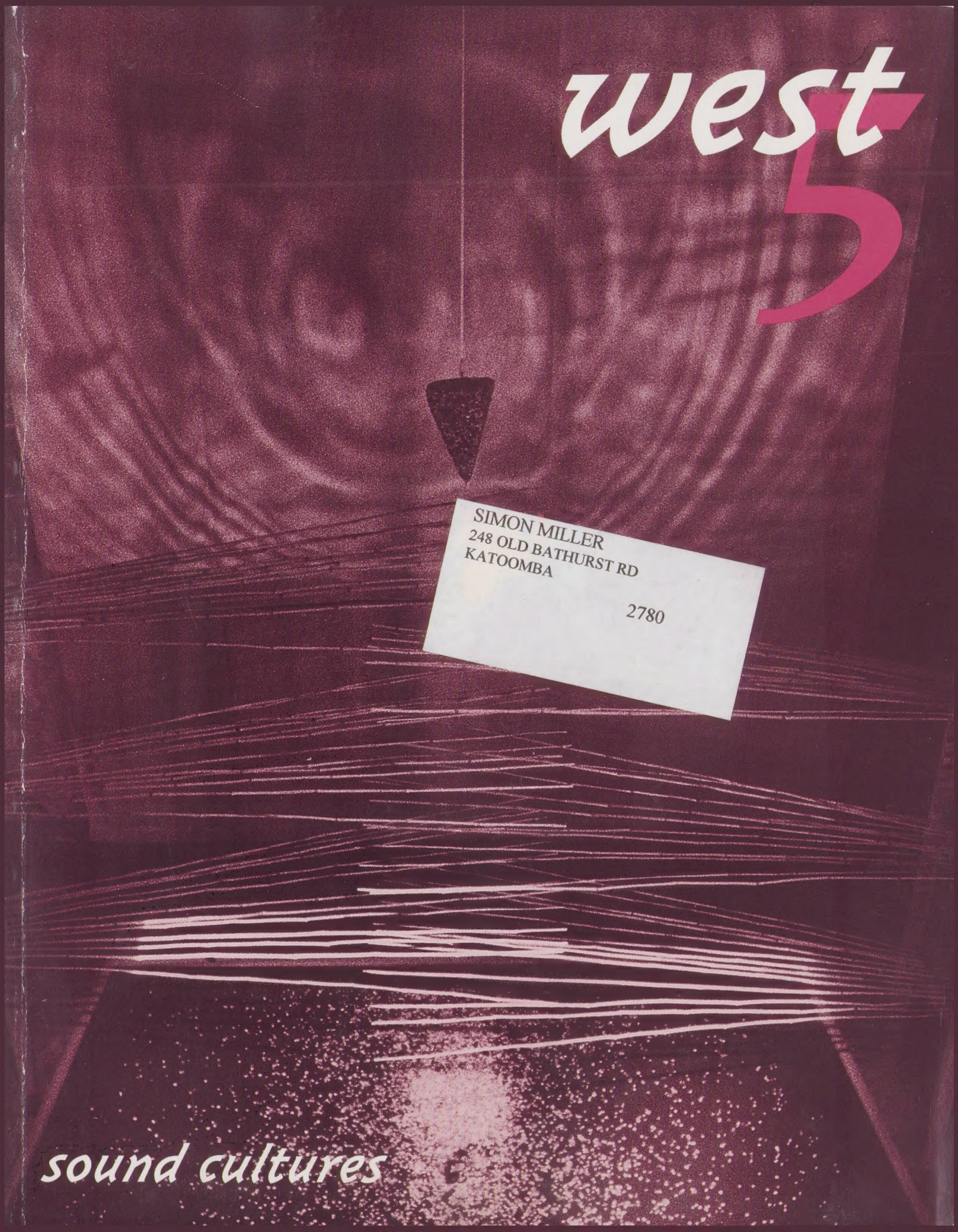
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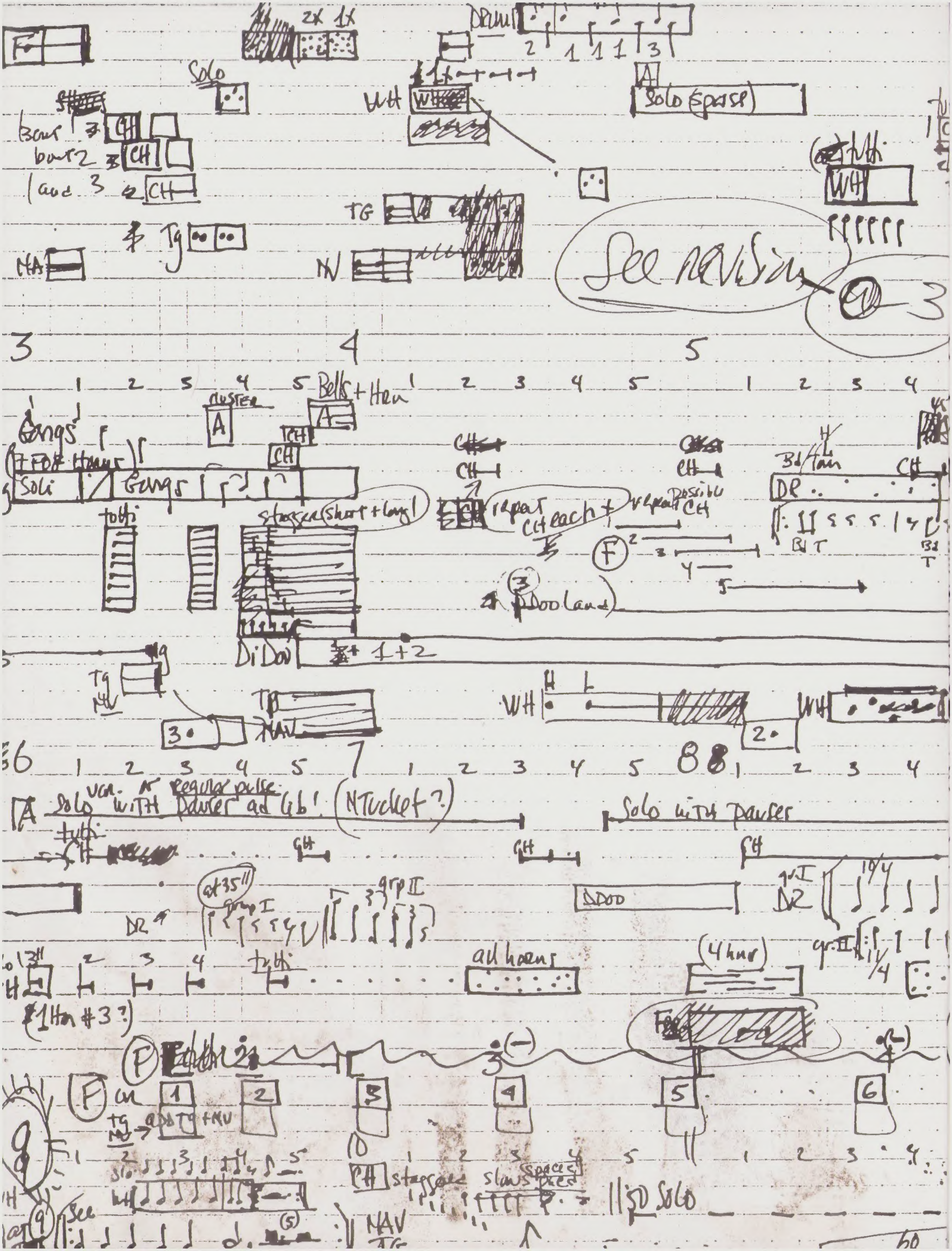

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3
4
5
1 2 3 4 5 Bells + Hrn
1 2 3 4 5
1 2 3 4
cluster
A
Gongs
Soli
Gongs
tutti
stagger (short + long!)
CH
CH
repeat CH each + repeat possible CH
F
DR
BD/Tam
BD T
Di Don
1+2
Tg
WH
H L
WH
3•
2•
6
1 2 3 4 5
7
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8
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A Solo WITH Pauses ad lib! regular pulse (N Tucket ?)
Solo with pauses
tutti
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at 35''
grp I
grp II
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10
1 2 3 4 5
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CH stagger slows spaces
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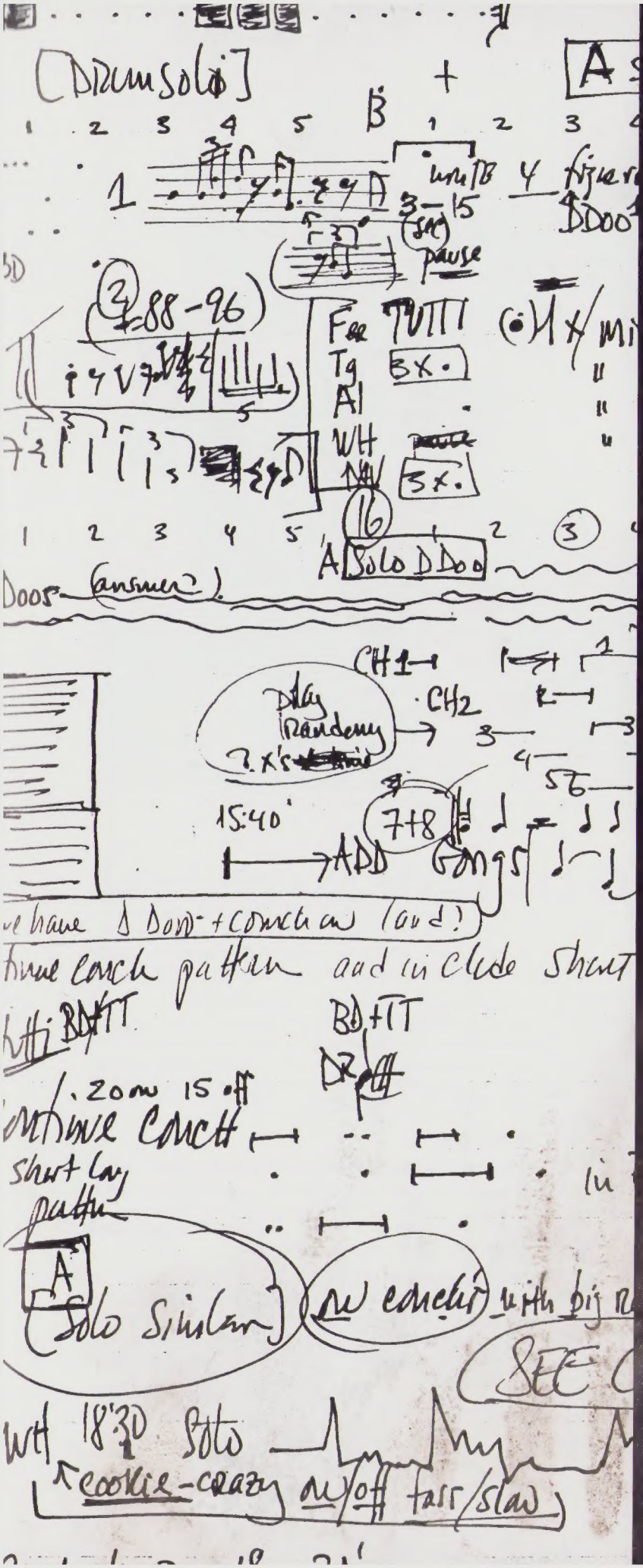

West No.5
Sound Cultures

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West No.5 'Sound Cultures'

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Issue 6: ***Reviews and articles on Performance, theatre and video***. Includes: World Theatre at Nepean, Performance Space reviews, Dumb Type at the M.C.A., Robert Wilson and ***Experimenta*** in Melbourne, overviews of the work of Bogdan Koca, Barry Kotsky and Lyndall Jones. Book reviews: Paul Carter's***Sound Between***, Anthony Kubiak's ***Stages of Terror***.

Issue 7: ***Architectural/historical profiles — East and West***. Includes: Exhibition spaces: An exploration of spatial models of exhibition, devotion and transportation (The Moving Walkway, Hyde Park War Memorial, "Stone Henge" in Ku-ring-gäi Chase, St Mary's crypt and the World Square black hole), Architectural modernism in the Western Suburbs, Photo-essay on the history of Australian theatre.

Simon Crosbie, *St Stephens piece*, St Stephen's Hall, Sydney, part of *Sound Cultures 1991*. Photo Heidrun Löhr.

Introduction

It is not always necessary for the true to be embodied; it is enough if it flutters nearby as a spirit and generates a sort of con

Colin Hood

cord, like when the sound of bells floats as a friend in the air and as a bearer of peace. Martin Heidegger, "Art and Space"

"Delightful!", he cried, "I shall go on like this forever. What a success I am." But nobody saw him. Oscar Wilde, "The Remarkable Rocket"

SoundCulture, is a series of events, performances, lectures, installations and tape-based works, begun in Sydney in 1991, moving through Los Angeles (1992) and Tokyo (1993). During this three year period (with an option for further events taking place on the Pacific Rim), participants (spectators, performers, perhaps the odd eaves-dropper) will be brought together to contest, perform, to look upon, to listen to, that which passes in the name of sound.

The title of the 1991 Sydney event, "Impossible Objects — Invisible Cities", alerts us to the paradox of how and where sound culture is to be encountered, if at all. The papers and essays presented in this issue of *West* range accross a number of thematics, contestations and narratives concerning the status of sound and related media.

Impossible Cities . This suggests primary task: to find a place for sound which does not subordinate it to mere acoustics (with implies a mode of accomplishment or origination determined by architectural or geo-political space).

Impossible Objects . On the one hand, a definitive conscious-

ness of the material or wordly richness of sound might seem desirable. On the other hand, a little bit of frustration (as every competent analyst knows) is always constructive. The moodier the better you might say: strung out between locating a finite awareness of 'fit' sound material (which never quite happens in the present) and a desire to institutionalise (some time in the future) what will never take place (as the goal or *telos* of sound culture).

But why hope *too* much for a sound culture in the first place when its history can already be plotted within the trajectory of modernism. For as Douglas Kahn suggests (in "Vibration, Inscription, mostly Transmission"), a history of "sound and aurality less laden with visual clutter" has already taken place (for those of us possessing the eyes and ears of the loving archivist).

One needs to proceed with caution in this task of extricating sound from its mediated (historical, contextual) embodiments. For an answer to the question, "What is sound?" (in the context of past, present and future sound cultures), can not be sought through essentialist arguments. Indeed, the present topicality of sound requires an examination (and/or appropriate narrativisation) of all the idioms and conceptualisations through which its culture has passed: as symbolist synaesthesia; as cacophonous revolt against idealist aesthetics; as liberated noise in the soundscape of everyday life; as what is inscribed and erased in old and new technologies.

This setting to work upon the 'truth' of sound (within the present technologised, synthesised configuration of different media) is by no means a simple task. A careful sampling of misconceptions, speculations and tropes concerning the place of sound within other media (literature, film, performance, radio, and sound installation) will certainly raise issues of materiality, place, instrumentality, frame and genre, creating a polemical environment for further excursions into its future embodiments and discourses.

One wonders how *SoundCulture* will present itself at the end of its present movement. To think of its end suggests a secure emplacement (as *topos*, referent, or as a regular bringing together of the clan). To think of it in terms of movement, flow and displacement (sound culture as *diaspora*) suggests an 'unhomely' end, a refusal of cultural form as 'second nature'.

Finally to think of *SoundCulture* as claiming our attention only for the present, is to think of it (as Adorno once proposed as the greatest work of art) as a pyrotechnic event: destined for a life of the breath-taking moment, a temporary piece of action, noise and memory.

Notes on Contributors

Keiko Torigoe is the director of the Soundscape Institute, Tokyo. She has collaborated with architects and with other artists on a number of permanent sound installations in Japan, and is the author of several books on sound.

Toshie Kakinuma is a musicologist and music critic whose work has been published in Japanese and American journals. She is about to publish a book on the musical instruments of Harry Partch.

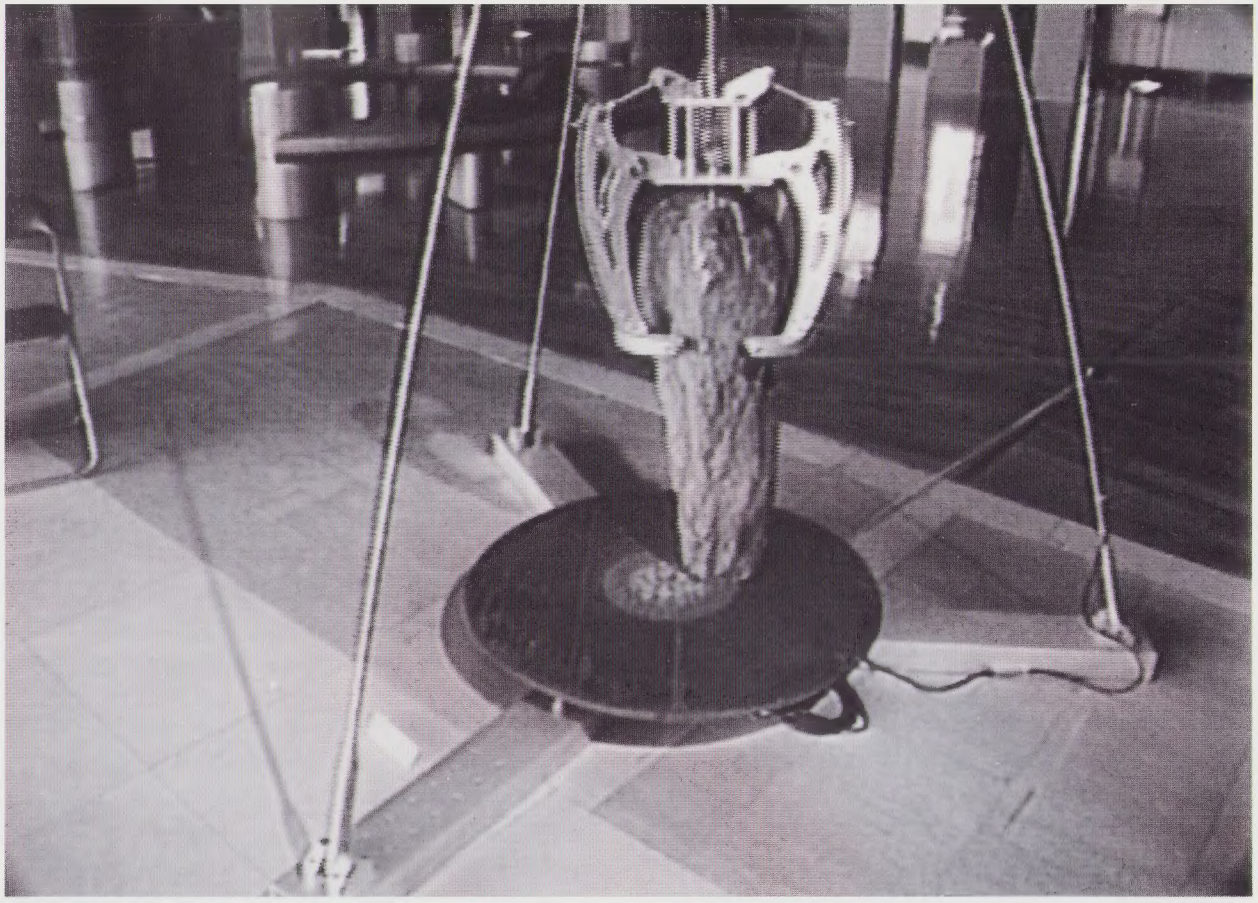
Douglas Kahn is an artist and writer. His audio artwork has been commissioned and aired through North America and Europe and his writings have appeared in *October*, *Art &Text*, *Public*, *Cinematograph*, and *New Music Articles*.

Ashley Scott is a sound artist. He has recently produced a radio work for the Listening Room and an audio installation for Australian Perspecta 1991 at the Gallery of New South Wales.

Gabrielle Finnane is a film and video maker and lectures in Temporal Arts at the UNSW College of Fine Arts.

Martin Harrison teaches sound composition and the cultural study of sound and radio at the University of Technology. His collection of poems will be published by the University of Queensland Press in 1993.

Paul Charlier is a composer and sound-designer working in radio, performance and film/video. He is currently completing a book, *Ways of Hearing: Aural Culture and Film Sound Design* funded by the Australian Film Commission.



Tatsuji Ushijima, *For the Memory 2* at *Sonic Perception*.

Audio Art in Japan

Toshie Kakinuma

Recently in Japan, a number of artists have begun to do work involving sound. Visual artists such as sculptors, designers, and light-artists, as well as musicians, performers, improvisors and sound engineers are paying attention to sounds in their individual contexts. They did not necessarily start out intending to produce sounds, but rather have come across sound while they were working in their own field.

Visual artists and musicians working outside conventional notions of music have come to meet through the medium of sound. Their activities have been given various names such as "sound installation", "art and sound exhibition", "sound performance" etc., depending on the context. Although the terms of "audio art" or "sound art" are not common in Japan, we could call the artists themselves "audio artists" or "sound artists".

As sound artists have recently come to work more actively, some museums and alternative spaces in Japan are paying more attention to their activities, and have started to provide spaces for their work. For example, Striped House Museum in Tokyo (their building is painted in stripes) now has a "Sound Garden" festival every year and Xebec Hall in Kobe presents a regular series of "Sound and Art Exhibitions", including a variety of work by sound artists in the Osaka area. Tochigi prefectural Museum had an exhibition called "Moments Sonores" in 1989, which included works by Joe Jones, Luigi Russolo, and Felix Hess as well as a number of Japanese sound artists. Kawasaki City Museum held a "Sonic Perception" festival this June, and the alternative

space P3, newly built at the underground of a Buddhist temple in Tokyo, has started a series of exhibitions which focus on sound art with an environmental bias.

25 artists participated in this year's Sound Garden Festival at Striped House, and there were also a number of performances. Hiroshi Yoshimura, the director of "Sound Garden" and a composer of ambient music or site specific music, views the "Sound Garden" as an exploration of environmental extensions of time and space through sound. Yoshimura and other artists are interested in the sound of natural materials such as bamboo, wood, stone, metal, water, ceramics, and artificial crystal. Most of these works are simple structures made to produce natural and pure sounds from their materials when "played" by the audience. The aim of the "Sound Garden" is "to play with sounds" or "to listen to natural sounds without any prejudice".

Sonic Perception was held at Kawasaki City Museum this June. Kawasaki is an industrial city near Tokyo, and the Museum is equipped with all kinds of hi-tech facilities. The festival included a variety of art forms and took a different direction from that of "Sound Garden". Various musicians, a video-artist, a sculptor, and a conceptual artist all participated.

Ushijima's work, *For the memory 2*, and *What is selected from the underground- civilisation*, are installations using sounds of rocks. His idea came from the playing of a record. He wanted to play a rock as if he plays a record. A rock is either spun around or cut by a needle. When it is spun, it produces noises which resonate with metal structures.

Takehisa Kosugi

Takehisa Kosugi is well-known as a composer for the Merce Cunningham dance company, and has been actively working as an improviser. He was involved in Fluxus movement in New York in the 60's, and later formed his own group called Taj Mahal Travellers, improvising with the members of his group in various countries and places. His improvisation is different from that of Jazz or Indian music which is based on certain formulas. It is not easy to explain the mechanism of his improvisation, but, as he himself puts it, it destroys his "self" and moves instead toward anonymity.

Since the early 80's he has started to exhibit what he calls "sound objects". One of his sound objects, *54 scattered sounds*, consists of 54 small sound generators which produce a sound like "chi....chi....chi...." at certain intervals. These generators are divided into 3 groups of 18, and each group is placed in a separate box. The first group is covered with sugar, the second with salt, the third with sand. The generators touch particles of these materials, and the sounds must pass through these layers of particles. Thus, the "chi....chi....chi...." sounds are changed to "tsu....tsu....tsu...." sounds or "zu....zu....zu...." sounds. Since it is very humid in summer time in Japan and salt absorbs moisture from the air, the generators covered with salt produced very different sounds from the original ones.

Kosugi's most recent installation was at P3, a new space built in a Buddhist temple in Tokyo. Here he also performed with his sound objects which incorporate a number of components and processes:

1. An integrated circuit which produces complex sounds. These are sent to two echo machines, and are modified. The sounds are produced from a small speaker, on which an aluminium object is settled. The aluminium object touches the speaker, and makes vibrating sounds. The cloths on which a light sensor is attached moves by the winds blown into the hall from the funnels on the ceiling. Thus the sounds react to the winds. Kosugi did a performance using this installation. He rubbed and struck the aluminium object with his violin bow, and put his violin on the speaker, so the violin vibrated to produce beautiful resonances.

2. He uses a small sound generator for each of the sound objects. It's attached to the bottom of the plate of metal and connected to a small speaker called the crystal speaker. It also produces "chi....chi....chi...." sounds at a long interval. Since several of these sound objects are placed together, the total effect of these sounds is like those of insects in a garden or a field.

3. This is a variation of the last one. The generators are covered with a plastic paper or attached to the plastic paper, and produce noises with winding motions.

4. In this sound object, an FM receiver takes the sounds of the space, and reacts to them. The sounds resonate through a thin aluminium plate.

Kosugi's main interest is in converting sounds into other kinds of sounds generated by different mechanisms. For instance, the electric sounds generated by the IC activate the aluminium object, producing acoustically vibrating sounds. Also, in the sound object using the FM receiver, the receiver reacts to the sounds of the space, and vibrates the aluminium board, returning the sounds to the space again. In other words, electric sounds are converted to acoustic sounds here.

The installation requires a very quite place because these sound objects are barely audible, very like insects or natural sounds in a garden. Japanese people have enjoyed natural sounds not as noises but as a kind of musical sound in the past, so the kind of listening solicited here may be peculiarly Japanese.

Akio Suzuki

Akio Suzuki is a brilliant inventor of various tools and instruments for producing sounds. Since the early '60's, Suzuki's sound performances have consisted of a series of events that were called *Self-Discovering Experiences*. One of these events was based on the idea of throwing objects such as a bucket of junk down a staircase and observing the physical and auditory results. In this case, junk becomes a functional instrument. This experience of throwing and observing objects/sound tools formed the starting point of his performance, and he himself, since then, has called them *nagekake* (throwing) and *tadori* (following).

"Throwing" does not necessarily require the action of throwing objects, but could mean producing and emitting sounds in a given situation. It could also include the conceptual concentration that would lead to the act of producing sounds. "Following" means to follow the phenomenon and to intently listen to sounds and resonances until they disappear.

For throwing sounds, Suzuki has invented various kinds of tools, the most famous being the *analapos* (the name is a combination of "analog" and "postmodern"). Built in 1972, it consists of a pair of open-ended black cylinders whose closed tops are interconnected with a pair of long coiled springs. (They look like toy phones connected by a string.) You can run, pluck, or scratch the coiled spring. The generated sound runs down the spring, resonates in the black cylinder at the other end, returns to the starting point and repeats the cycle until it eventually fades out. The player can also stretch the coiled spring and sing into one of the cylinders. The resonating voice transmits to the other cylinder, vibrating the entire instrument with echoing effects. Suzuki throws sound waves through the *analapos*, and follows them with his voice to the furthest point that he can reach.

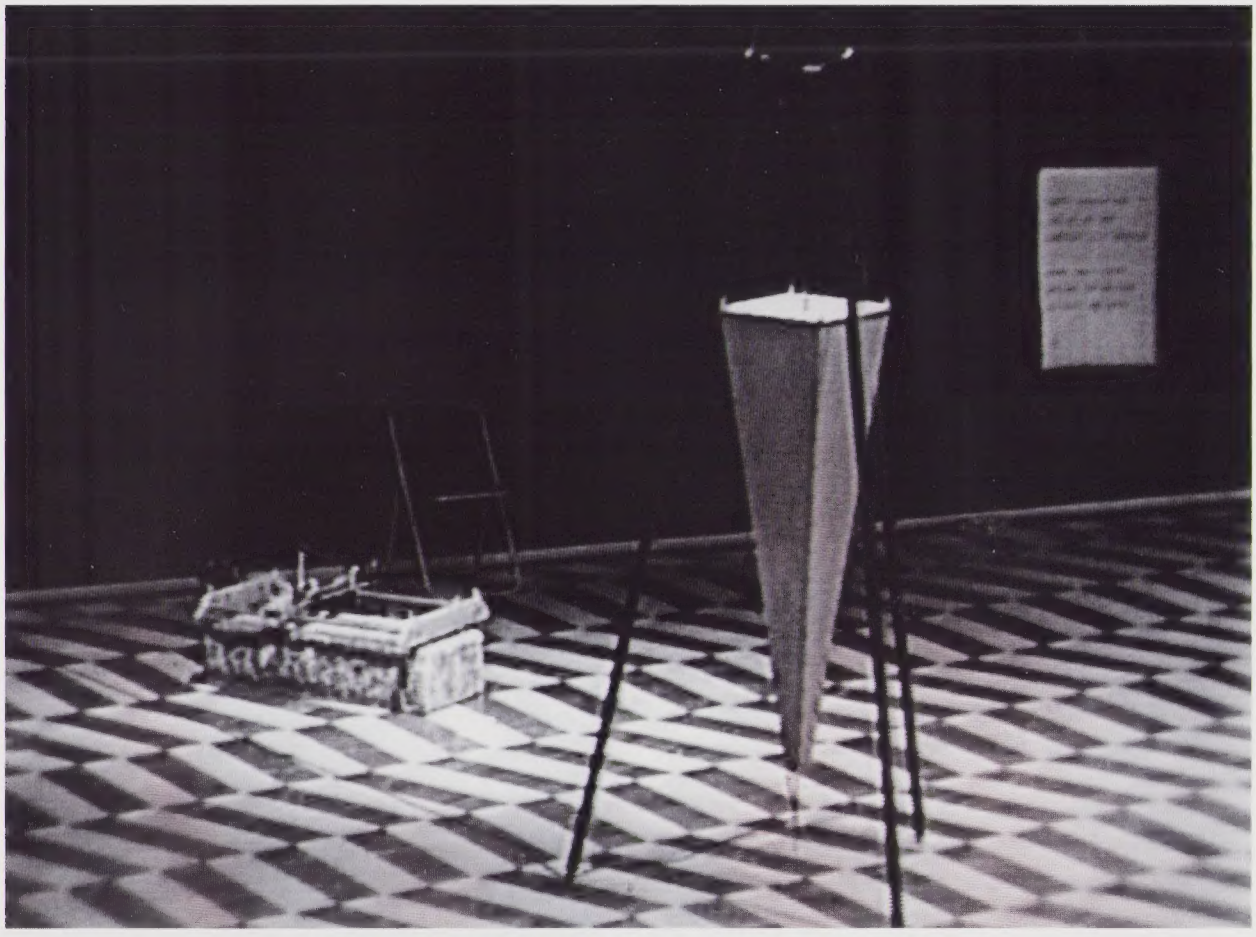
Several years after the completion of *analapos*, Suzuki found another way to execute the concept of following by allowing this sound instrument to vibrate with natural breeze. When the coiled spring was stretched over the slope of a sand hill, he saw that it produced a so-called Aeolian harp phenomenon: pipe organ-like sounds resonating back and forth on a kind of scale. Aided by natural air movements, the instrument produces its own sounds without the involvement of a performer. This experience made Suzuki realise that he must take the role of "listener". This has enabled him to develop the idea of "following". "Following" is not a passive, but a very active and intense act of listening. Suzuki states that when he was a child, he was interested in natural sounds such as the sound of breezes and murmuring sounds of a brook, and he wanted to recreate them in his music. Listening to natural sounds, which is usually deemed a Japanese manner of appreciating nature, seems to be the origin of his concept of "following". Suzuki returned to this origin in his recent big project.

Space in the sun, simmering in his mind for ten years, was a project to listen to nature on the autumn equinox from sunrise to sunset between two walls of bricks built on the meridian. For this project, he moved, with his wife Junko Wada, a dancer, to a small town near Kyoto. With the assistance of some of their friends, they dug out the gourd, hand-fired 20,000 bricks out of the soil, and built two walls (322cm high and 1738cm wide) which ran parallel to each other. It took about one and a half years to complete their construction.

Akio Suzuki playing *Analapos* at the *Space in the Sun*

In order to concentrate on listening to nature for twelve hours at one sitting, Suzuki needed the walls high enough to block his view. He chose the autumn equinox (when the weather is usually mild) because he would have to sit outside for a long time. Suzuki executed this performance on September 23, 1988. No one else was present. After this project, he stated, "I was listening to something, without thinking of anything. I was intensely listening to sounds in nature."

In this private performance, the two walls can be considered sound tools for throwing and following. They work as a big *anala-*



Tatsuji Ushijima, *What is selected from the underground ... civilisation* at *Sonic Perception.*

pos for "throwing" sounds and for concentrating on the act of listening/following. He keeps sounds of nature intact, and uses the walls as a framework for listening to nature.

Suzuki recently organized a sound art festival in Tango region near Kyoto where he is now living. This region is rich in nature and has a number of ruins inside. The festival included sound installations, performances, seeing nature, and visits to ruins and to the two walls built for *Space in the Sun.* Felix Hess, Yurius from Germany, and Takehisa Kosugi all attended the festival.

Kazumichi Fujiwara

Although he studied composition at one of Japan's Universities, Fujiwara's career started not as a composer but as a sound artist. His first exhibition entitled "Echo Location" (1968) included a performance with sound instruments which he built himself and which he called *Ongu* (sound instrument or sound tool), a term which is now commonly used in Japan.

The *Echo Location* series were conducted mainly outdoors: at the beach, on the street, or in a vacant ground in the city. In one of the *Echo Location* events in 1974, Fujiwara used huge logs which were spun around with the aid of machines so that they struck other objects such as a concrete blocks or the ground, producing various kinds of noises. In this event, Fujiwara was interested not only in sound but also in the phenomena of vibration. Since then, vibration and the sense of touch have been the main subjects of his activities.

Fujiwara participated in the Venice Bienalle in 1976, and stayed in Italy for over ten years, returning to Japan in 1988, where he discovered the SONY Walkman. He found the Walkman's small earphones particularly interesting because they transmit sound not through the air but inside the ear, as vibrations through skin and bone. He has since experimented with various kinds of tools and apparatuses which work this way.

He has also developed the Neuro Wave Recording System for 3 dimensional sound recording. The Neuro Wave Recording

System stimulates the skin with the vibration of sounds. It consists of a special dummy head which can record sounds from the front. The dummy head has two ears on its face as well as another two on its sides. When one hears recorded sounds by this system, one feels and touches sounds at the same time. For instance, if the buzzing sounds of flies are recorded using this system, the listener feels as though the flies are actually flying around his or her head. If one talks into either one of the side ears, the listener can even feel the breathing of the speaker. One can say that this system enables one to realize so-called "virtual reality" through the artificial sense of "hearing".

This system was presented at the Hyper Real Exhibition held in Tokyo last year, and it attracted a great deal of attention. Fujiwara describes it as an attempt to draw sounds into the inside of the listener by directly stimulating the centre of the brain. One can even get the feeling of softness and hardness by the vibration of sounds.

The Hyper Ear was also presented at the "Hyper Real" exhibition. It consisted of 2 ears which had a height of 2 metres. If one passes through a passage between these two huge ears, one hears various kinds of sounds. Since the pathway of the ears is shaped in exactly the same way as the real one, the sounds are supposed to be heard as if they are passing through the winding passages of the ear. However, this did not work as well as expected at the exhibition. Fujiwara is experimenting with new small ears now, collaborating with Toshio Iwai, a media artist who is working on hyper real images.

Fujiwara's activities focus on an artificial sense of hearing rather than listening to sounds "in reality". In other words, his interest lies not in sound as such, but in sound as a tool or medium to produce vibration. In this respect his work is quite different from that of other people and suggests a new direction for audio art.

We have observed recent activities of sound artists in Japan. I am not going to summarize the full range of their activities, but would like to point out three things in conclusion.

Some artists like to use natural materials such as wood, bamboo, gourd, stone, metal, and ceramics. Water and even living bees are also employed in some installations. As you know, the American composer Harry Partch employed natural materials such as bamboo, wood, and gourd for his own instruments. He was a pioneer of instrument building and sound sculpture. You have also recognized the significance of natural materials in Mineko Grimmer's installation which employees bamboo, pebbles, and water. The instruments or sculptures are simply built, but often supplied with beautiful visual shapes so that the listener can enjoy them both aurally and visually.

A reflected consciousness of time and space is significant in these works. Kosugi's work (which employs cloths and light sensors reacts to winds which blow from the funnels on the ceiling) is site specific and time-based. Suzuki's *Space in the Sun* sets a precise use of space (the meridian) and a specific time (the autumn equinox) to frame his attempt to listen to the sounds of nature. Tatsuji Ushijima's installation emphasises the process by which the sounds and the grooves on the rock are gradually changed over time.

The conjunction of performance and sound installation is also significant in this regard. Kosugi and Mamoru Fujieda both perform with their sound installations. Since the installation itself is usually settled in a specific place, it is in its essence spatial, but performance introduces a temporal aspect into the installation. It provides a framework, i.e. a beginning and an ending, to experience the installation.

We usually speak of listening to sound, but in Fujiwara's case, sound is vibration, and it should be touched, or felt by our other sense organs. In his work, sound does not resonate in the air, but becomes a tool or medium to stimulate our total senses.

We have examined recent activities by Japanese sound artists, focusing on the instruments, tools, and apparatuses that they are employing. The sound media they are using include simple sound tools made of natural materials, found objects such as piano and fluorescent lamps, original gadgets and high-tech apparatuses. With these media, sound artists are exploring in their individual way, either sound itself, or the spatial and temporal process in which sounds are produced, or even the unseen field beyond the sound. In all of these directions sound art awaits further exploration.

From Foghorn to Shofar

Steven Lowy

How can I say about the music, how can I

deal with all the musics, after they've lasted?

The linch pin is on the snare. And is When

the point?

from *Of What The Music to Me*, Clark Coolidge

I Ground Sound

Alvin Curran's definition of music has been for 25 years, eclectically elastic to allow for what poet Robert Creeley called A Form/Of Taking/It All. Curran's elastic "band", and intuitive, idiosyncratic composing style, embraces music that he notates, improvises and finds. A collection of sounds that Curran then mixes up, producing a personal and complex soundscape: a putting of soundings, layer upon layer, for site-specific events, radio and the concert hall. There is a polyphonic logic in his work and no incongruence as a loop of a prairie chicken mating call suddenly modulates into an excerpt from a Bach chorale and then moves onto a refrain from the American folk tune "Home on the Range". This is then counterpointed with another layer of music on which a foghorn solo moves against and with a virtuosic jazz piano solo played live by Curran.

> It is as if I were in a playroom full of toys that sound. As I make music I listen and feel for harmony that comes from what I'm playing with. I then try to make the playing more complex and varied.

Curran alludes to his process as "controlled chance" in which he prepared many fragments of music (intuitively and not according to any system) ahead of the time of the performance and then improvisationally mixes them together during the performance. Most of his pieces operate in this way where there is an overall vision and intention of how the music will unfold but the "spontaneous mixing" element brings forth unpredictable and surprising results. No two performances of a Curran piece are the same though there is an identifiable cohesiveness that makes them the same piece.

II Background

After piano lessons began at age 5, Curran went on to learn jazz and played in a band with his lifelong friend poet Clark Coolidge. Compositional study at Brown University with Ron Nelson led to further study at Yale with Elliott Carter. In 1963, Carter brought Curran to Berlin as his assistant for the year. From Berlin, Curran took up residency in Rome where he has been living ever since.

Rejecting his academic training in 1966, Curran, along with Frederic Rzewski, Richard Teitelbaum and others, created the experimental improvisational group *Musica Electtronica Viva* which dedicated themselves "to make music with whatever means available". They gave hundreds of concerts in Europe and the US, becoming well known for their anarchist performances and pros-

elytising the message that "everyone can and should make music". Their most active period was 1966 to 1972.

During the seventies, Curran focused exclusively on his solo performances. He continued to bring sounds from the natural world into his musics (a practice begun in 1966) and to refine an ongoing series of musical solos which brought together electronics, piano and tape. He began making recordings of these performances, of which *Dark Flowers/Light Flowers, Songs and Views from the Magnetic Garden, The Works, and Canti Illuminati* are his best known.

III Grounds around the Concert Hall

A major turning point for Curran's music took place in 1980 when he produced *the Lake*, a piece for groups of singers situated in rowboats on a small body of water, tape (sounds of loons, bullfrogs, etc.) and conch shell.

> [This was] the beginning of a series of pieces called *Maritime Rites*, which since then has led me to tracking down and recording all of the fog horns on the Eastern seaboard of the United States (and) directing ship horn concerts in European ports and rivers (...) [These] modest beginnings of my "putting natural sound back into nature" evidenced in *The Lake* have had very important consequences for my work in general.

In the years since *The Lake*, Curran has completed several large site-specific works, using a lexicon of musical elements and techniques: multiple percussion units, vocal choruses, outdoor reverberating acoustic spaces, tape, notated scores for performers, and spontaneous mixing of all of these. By logically extending materials, ideas, themes and techniques from one piece to the next, Curran has developed a line of increasing conceptual and technical complexity in his musics. This creates an impression that all of his pieces are organically growing out of one another.

For example, the simple scoring of ship horns in *Maritime Rites* (the radio version) eventually led to a full blown piece for 22 ship horns called *Waterworks — a Concerto Grosso for Shiphorns and Celestial Drums*, performed in Linz as the closing event of the Arts Electronica Festival in October of 1987. For the piece *Waterworks*, 22 ship horns were spread out over a distance of one kilometer on both banks of the Danube around Linz. 11 of the horns were controlled by a computer program while the other 11 were manually played. Other instrumentation included 2 digital keyboards (played by Curran), a tape amplified over 60,000-watt speaker columns as well as a military band with 6 bass tubas, bass trombone, and baritone horn. All elements were coordinated in time by a conductor via radio.

In a review of Curran's music, Matthais Osterwold notes the difficulty in writing virtuosic music for ship horn:

> To counter the dangers of monotony inherent in the horns' limited pitch range, (Curran) applies a structural principle that consists of repeated new starts with alterations in the tone constellations, abundant change in measure, uneven measures and syncopated, i.e. polyphonic method of organizing the tone durations, with general rests effectively stressing the spatiality of the sound.[1]

IV Ground covered

The coordination of playing ensembles in time and across long distances is another ongoing concern from piece to piece in Curran's work:

> From my earliest experiences with collective improvisation and environmental sound some 20 years ago, the concepts of human trust and geographical scale have become an increasingly important part of my musical thinking. ...I have been strongly influenced by the works of artists like Smithson, Christo and Long which have offered me insight into stretching sounds over large spaces.

On January 1, 1985 as the premiere event of the European Year of Music, Curran explored further his ideas of playing music over long distances when he wrote *1985 — A Piece for Peace*. Nearly 300 musicians divided into 3 equal groupings were situated in 3 European cities (Amsterdam, Frankfurt and Venice). These ensembles of mixed choirs, percussion, brass bands and accordions played simultaneously for 50 minutes "without seeing anyone except the members of their own groups." The musics produced by each group were then sent via radio to Frankfurt where they were mixed with a pre-recorded tape by Curran and then aired live for the radio audience. Long tonal melodies threaded their way through one another while voices speaking in Dutch, German and Italian periodically recited the names of the world's nations; church bells from Venice answered church bells from Frankfurt.

AKAI
S1100

V History grounds, Battle grounds

Three years later in 1988, Curran, using the same technique of linking cities via radio realised another site-specific event written especially for radio. *Crystal Psalms* was commissioned by the InterEuropean Radio Association to commemorate *Kristallnacht* (Night of Crystal), November 9th and 10th, 1938, which was the beginning of Nazi Germany's vicious attack on European Jewry. On this night many synagogues, shops and homes were smashed and burned.

For *Crystal Psalms* Curran linked 6 European cities (Berlin, Vienna, Paris, Frankfurt, Hilversum and Copenhagen) to a central control mixing board in Rome, where the musics were mixed and sent out to the radio audience.

The relationship of *1985 — A Piece for Peace to Crystal Psalms* is more than merely a technical extension from one to the other. In the first work, Curran explored the themes of peace, harmony, trust, geographical distance and music making as a means to bring people together. Curran had this to say about the musical and social impulses in the making of this work:

> A consistent and substantial part of my music in the last 10 years has been dedicated to the utopian dream of making spontaneous music with large groups of people. This is, in my view, a way of music-making which transcends specific histories, styles, trends, forms, contents, social origins and traditions. ... It also encourages "supralinguistic" understanding, leading people through peaceful means to peaceful ends.

Crystal Psalms, on the other hand, is anything but a piece about peace. The sonic vision here is about war and destruction, hatred and rage. Curran shapes the moments of those dark times into a personal statement which can be shared by many for its intense shock, anger, confusion and ultimate bewilderment. History is presented as a shadowy spectre which slips into the aural field, presenting a portrait of the time (in time) infused with sounds and sound symbols of the attempted Jewish genocide. A shofar is heard against the breaking of glass, against the sound of human cries, against the singing of Jewish cantors, against the voices of a fascist regime. *Crystal Psalms* is an apocalyptic polyphony which, when taken with the utopian vision of *1985 — A Piece for Peace*, present a balanced musical view of the good and evil we continue to face as a species.

VI Holy Ground

In *Crystal Psalms*, Curran makes use of the shofar (a Ram's horn, 60-80 cm long) which is a traditional Jewish instrument reserved exclusively for the High Holy Days. The shofar, much like the ship horn, is very limited in its musical capabilities. Possibly for this very reason, Curran felt challenged to write a piece of music for it. In 1990, Curran completed a concerto called *Shofar*, a 36-minute work for 5 shofars, soprano clarinet, accordion and tape, commissioned by the WDR for the festival *Die Begegnung der Diaspora mit Israel.*

> The shofar is the *ur-trumpet* par excellence and no doubt reaches back in origin to pre-biblical times and continues, albeit with limited use, in the contemporary Jewish tradition. ...This is the first time that I have taken up the challenge to create a 'concerto' for this difficult and musically very limited, archaic instrument. As a child, I remember that it was always a great thrill to see and hear this horn played, especially on Rosh Hashanah when it is used to announce the New Year. It didn't even seem to matter that the shofar player in our synagogue was really quite incompetent, leaving the congregation guessing if he would or would not succeed in producing any sound at all ... I will produce sounds with this instrument in my own way.

In *Shofar*, Curran's unusual orchestration made a web around his solo shofar tones which were fed into a pitch-to MIDI converter, and in turn into the MAX computer program for the Macintosh computer. The computer then piloted an array of synthesizers. The resultant music was then accompanied by a tape part made of music gathered from the Jewish liturgy, in particular a record of Yemenite Jews praying at the Western Wall in Jerusalem on *Tish B'av* (the Day of Lamentation), 1987.

Of the mixing of ancient technology and current state-of-the-art electronics, Curran has said: "contemporary man cannot do without either." And when talking about the limitations of modern technologies:

> ...none of my synthesizers could accurately reproduce the sound of a shofar. These electronic devices ... are by far the more "primitive" ... The shofar, for all its serious musical limitations, appears to have 'soul and body' while the sounds and timbres from the black boxes ... still have that sound of a lobotomized Nineteenth-century orchestra.

The concerto for shofar is religious music of a sort. Sacrilegious to any orthodox Jew (akin to using the Christian cross as a golf club), the role of the instrument is to inspire other technologies to make music. The thematic premise is that music can still be a vehicle to a spiritual climate. There is a "religiousness" to the music with the intent of bringing about a deeper listening. This music has a utility that is not foreign to musical tradition.

VII Common Ground

Shortly after realizing *Shofar*, Curran completed yet another work using the shofar but not featuring it in such a predominant role. *A Call to prayer*, written for the New Music America Festival in Montreal, uses musics and instruments from a variety of religions and traditions (Buddhist, Jewish, Christian, Moslem, Animist, Shinto, Coptic and North American Indian). All of this is heard on tape while 3 percussionists, 2 shofars, a mixed choir and church bells perform live in and around a church bell tower. This work, lasting 30 minutes, creates a mosaic of religious musical quotes and references: the hierarchical architechtonic structures of the Christian choir music, a dominating vertical tower of sound, fades into a twilight of Buddhist chimes and soft low drones; the Moslem Muezzin and the Jewish cantor, almost indistinguishable from one another, wail their laments before they are interrupted by a female gospel singer from the American deep South. The work at one time and in one space brings together musical religious traditions/tones, showing their similarities and differences. Tempos merge into ideas; densities grow into spirit.

VIII Grund Riss/Notes from Underground

In 1987, during the DAAD residency in Berlin, Curran began a collaboration with visual artist Melissa Gould. Gould had been researching the World War II history of Berlin for an installation called *Floor Plan*. In a description of her project, she writes:

> *Floor Plan* is a life-sized architectural blueprint drawing of a formerly existing Berlin synagogue, reproduced (to scale) on a grass strip between Bruchnerhaus and the Danube River in Linz. Fluorescent tubing installed in the earth articulates the floor plan of the destroyed building, transforming it into a ghostly drawing of light.

While researching this project, she was reminded of a statement made by the late American composer Morton Feldman. When asked if he would consider living in Germany, he immediately replied: "Ridiculous! The dead are still screaming out from under the sidewalks!!" She asked Curran to write the music for the installation:

> Though intent on other music projects at the time, I turned my full attention to (Melissa's) work, for in it I envisioned a musical counterpart: a wall of sound made of millions of voices that would run parallel but rise up from her architectural design installation — a wall of sound that would come out of the Earth itself. As a sonic mirror to *Floor Plan*, my piece *Notes from Underground* was born.

Arts Electronica commissioned the installation and music for realization in September of 1991. By the Spring of that year, Curran, with the help of his students at Mills College (San Francisco) discovered that by placing speakers 3 feet underground faced down (not up), the sound could travel up through an air chamber, then through plywood with holes covered with sod and grass, and be heard quite clearly. Then when he returned to Rome, Curran mixed 45 tracks of various sounds and musics into 15 subtracks and then into 4 one-hour 2-rack tapes. It was to be his largest mix to date. On the 45 tracks were recordings of hundreds of unaccompanied human voices (choirs and soloists) singing from the world's religious musics; the sounds of animals (those threatened with extinction: elephant, whales, wolves, loons, bison, etc.); and the sounds of pile drivers, trains coupling and drum machines. In the process of mixing, the number of sounds was exponentially increased, so on Curran's final mix there were indeed millions of voices: "a wall of sound".

IX Gerund — A Ground of Language

Not all of Curran's later major works for radio and site-specific events have such strong programmatic content. *Erat Verbum* is a 2-year, 5-part project which Curran is in the midst of finishing. The first part called *ALPHA* is a work about language which mixes and processes a variety of languages: Basque, Korean, Ibo and Yoruba (Nigerian), Tibetan, Russian, Serbian, Japanese, Mohawk, Greek, Arabic, English, Hindu and German. Curran recorded different native speakers, some reciting 20 simple words (eg mother, cloud, tree, river, etc) in their native tongues, others reciting their alphabets, while some spoke simple everyday phrases or greetings (eg in Ibo: "Oh, dear friend, welcome to my country").

> I recorded single words and phrases as basic material and stored these digitally in a sampling machine. This machine, when connected to a MIDI keyboard allows one

to literally "play" the voices ... What the listener in fact hears is the result of my playing the voices and languages directly from a synthesizer keyboard.

The second part of *Erat Verbum*, called *BRAVO*, is exclusively concerned with sounds from the animal world. For over 25 years, Curran has been collecting animal sounds from all over the world (travelling in 1989 to Texas to record 20 million bats, out of their Summer night flight). About his career as a naturalist, Curran has said, "Sounds taught me how to make music; I used to go in search of sounds I could use. Now I find more and more I can tape almost anything and make music with it."

The difference between *ALPH A* and *BRAVO* is that:

ALPHA uses a rapid-fire rhythmic approach to short sampled human vocal sounds (whereas) *BRAVO* bases its sometimes slowly moving structures on longer recordings made in the field. ... Through long durations we can begin to appreciate the meaning of audible animal communication. ... It's like a world of millions of individual "loops" running all at the same time. So through my imaginary acoustic re-creations of this savage but "peaceable kingdom", I wish only to underscore the infinity of natural "musics" going on around us all over this planet, all the time.

X For Ground

These few notes on Alvin Curran's musical project are not meant as a full sketch or outline of the composer and his work. Rather, they only suggest a general drift in the composer's thought, directions and sympathies over 25 years of making music. Not discussed were any of the long list of works for concert hall performance which include innovative work with the computer and also some of his other major site-specific works such as *Tufo Muto*, a "rock concert" for musicians, tape and stone quarry. No doubt as Curran's career continues, the intricacies of his musical quilt will become more defined and engaging.

Elliott Carter :

The characteristic effort of the serious composer, as I see it, is not so much in the invention of musical ideas in themselves, but in the invention of interesting ideas that will also fill certain compositional requirements and allow for imaginative continuation.[2]

... Marvels
of the thermous oak, and sendings of the told back sound.
He's up there, I heard it through the service door.
Last bars, frantic postcards, Linings of the road.

from *Of What The Music to me*, Clark Coolidge.

1. Osterwold, Matthais, *Komponieren Heute*, NZ, *Maritime Rites:: Concerts with shiphorns and other environmental water music by Alvin Curran*, 1987.
2. Carter, Elliott, *The Writings of Elliott Carter: Shop Talk by an American Composer*, Bloomington: Indiana University Press, 1977.

Notes on the 6th Australian Video Festival

Gabrielle Finnane

Unusual, unexpected works: Rea Tajiri's *Off Limits* runs the closing visuals and lengthy rolling credits of *Easy Rider* after the text of a monologue delivered by a Vietnamese assassin to two U.S. police. The text is from a film called *Off Limits* (released in Australia as *Saigon* — a little known piece of action fantasy with Willem Dafoe as a policeman in love with a French nun and with his partner Gregory Hines tracking down a serial killer in Saigon). A film made in 1968 about 1968 and a film made in 1987 about 1968 — Tajiri's *Off Limits* ambiguously refrains from further representations of the subject and instead transcribes dialogue and end credits as emblems, respectively, of certain kinds of film. The Vertigo episode from Tajiri's *Hitchcock Trilogy* (USA, 1987, 15mins) is Bernard Herrmann's music, a red background and three descriptive sets of titles — the first a description of a painting of Chinese antiquity — and again the work is impersonal, ambiguous and memorable. The consistently interesting and eclectic German program — the outstanding program of this festival — included *Eisenkuss* (*Ironkiss*, Matthias Glatzel,1986, 12mins). Reagan's state visit to a cemetery for WW2 German soldiers is censored by a black letterbox mask which never allows us to see higher than the handle of the limousine door. Our vision of the visit is an enigmatic peek at an armoury of cars and the suited trouserlegs of officialdom moving to nondescript sounds. *Mutter Vater ist Tot* (*Mother Father is Dead*, Raskin 1987, 7 mins.) is the collaborative work of a group of performance artists who relate a story in musical chairs fashion, swapping characters at random and without warning whose mental images sometimes appear to flesh out their dialogue. Their work (also seen was the less interesting *Rauchnachte* (*Smoke Nights* , 1990, 10mins) was also detached and ambiguous in tone.

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Dara Birnbaum's work, as she herself states, has been consistently concerned with an analytics of gesture, both in relation to appropriated imagery and her "own" filmed material. But this analytic quality is muddied in the *Damnation of Faust* (USA,1983 — 1987, 22mins) series by decorative repetition. This series comprises three parts — *Evocation*, *Will-o'-the-Wisp* and *Charming Landscape*, and was created for gallery installation. Although her most ambitious work, it reveals the limited scope of the techniques she uses in editing, principally, repetition of actions in

sequences of jumpcuts and (more recently) the slowing down of movement. By this means, an initial idea is merely prolonged, like much video art. In fact the work on TV repeats the dynamism of TV while the personally created work has all the traditional hallmarks of artistic authorship — the slow pace, the textured look. Her early method of work she characterised as the speeding up of the story, the slowing down of the physical dynamics and text. This method has the effect of both glamourising and criticising its TV object. In *Wonder Woman* (1978, 7mins) for instance the application of serial techniques condenses the story but the emphatic repetition of the violent and dynamic effects of the TV footage — the explosions, the spinning body of the woman, the bursts of blinding light — and Birnbaum's addition of the Disco song *Wonder Woman in Wonderland* are nostalgically engaging in the manner of kitsch. It becomes in a way a more entertaining form of TV — just the high points .This formalist exaggeration of effects runs through all Birnbaum's work with TV. Strangely the same dynamism is not present in her work of the 80's which, instead of contracting and intensifying effects, draws them out. In fact, the *Damnation of Faust* trilogy and *Take Back the Night/Canon* (USA, 1990, 10mins) seem elegiac in their treatment of politics: the young women in Part 3 of the former, *Charming Landscape*, are politically uninterested and while the piece seems to be nudging them for their reluctance to participate, with its footage of political demonstrations from the black civil rights movement, Eastern Europe and Tien-an-men Square, it is also elegiac in its portrayal of this detachment of women from public life. *Canon* likewise juxtaposes the politics of one group with another — the 60's with the 80's — elegiacally. While the loud vibrant soundtracks of the early appropriation works were designed to grab the interest of the audience in the spaces where they were installed (whether public sites or galleries), the soundtracks of the eighties works seem designed to merge into the climate of gallery installations, where moderate noise can be accommodated if its repetition becomes ambient. Visually, too, where the TV works require attention — you have to watch the split screens in *Kiss The Girls/Make Them Cry* to follow the careful re-presentation of the gestures used by the women on TV — the recent works seem not to require watching through, but just occasional attention; their slow, cyclical movement makes any development a matter of indifference.

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The standard sound/image repertoire (and what video has in common with MTV and much contemporary experimental film): paisley and kaleidoscope patterns, water, seas, oceans and rain, swimmers, divers, dancers and boxers in slo-mo, industrial machinery and landscapes, close-ups of faces drifting by in slo-mo; the sound of dripping taps, grinding industrial noises, chimes or glockenspiel tunes, heavy breathing, panting, heart beats, nocturnal screams. And two styles of voice: one is intimate, somewhat maudlin, portentous; the other is doubled, reverbed, synthesized, the emanation of a machine, a mock-voice of science.

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A lot of video work has devoted itself to reversing the valuation of the video image as "ugly, harsh and flat" by creating granular, decomposing, or liquid imagery, that is, a pictorialism derived from the ideology of painting as expressive gesture. The acceptance of the convention of video art as a visual art leads to a preference for simultaneity and scenic composition over temporal succession and montage and sometimes, in allegience to this gestural ideology, to a preoccupation with 'flowing' visuals, an aversion to the sharp cut, a fondness, or fetish even, for dissolves. And so we have the romantic video work of the 'moving painting', where either the tableau or the continuously evolving, 'flowing' image exemplifies visual art. There are thus two types. *The Orchestra* (Zbigniew Rybczynski, USA, 60mins) and *The Assignation* (George Snow, UK, 1989, 12mins) were instances of one type, which usually is high-resolution and, like salon painting, glossy. Most of the 10-minute episodes of *The Orchestra* consists of one apparently continuous but strictly impossible tracking shot over a recurring tableau; Peter Greenaway's *Prospero's Books*, made with the help of high-definition video technology, is an example from recent cinema of a similar mimesis of tableau painting.Where "flow" is preferred to mannered composition the visual style is usually impressionist, with lots of slow motion, misty landscapes or drifting superimpositions. There are many video artists who work in this way at least some of the time. In this show, *Faraway* (Geoff Weary, Australia, 1991), *Museum of Fire* (Chris Caines, David Hains and John Conomos, Australia, 1991, 45mins), *L'Isle Mysterieuse* (Robert Cahen, France, 1991, 15mins), *Techno Dumb Show* (John Gillies, Australia, 1991, 20mins), *Anthem* (Bill Viola, USA, 1983, 11mins), *Hard Times and Culture Part One* (Juan Downey, USA, 1990, 35mins) all showed some allegiance to this version of the painterly aesthetic, with varying degrees of artistic interest. It need not be stressed that it is also prevalent in experimental film.

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A few works of sceptical wit held out hope that not all contemporary humour relies on a kind of complacent pop irony. For droll-

ness nothing could match the ruminations of the narrator in *Red Bus* (Patrick McCarthy, England, 1991, 3mins) a character called Frank Pork whose almost-great sketch Red Bus was held on the video screen for speculation on its artistic influences (Matisse et al) and social implications (the narrator gets hungry while thinking about his painting). Then there was the idiosyncratic documentary *Bread and Games* (Germany, 1991, 29mins) by German artist Monika Funke Stern in collaboration with Sascha Kadyrov. Monika Funke Stern travelled through the Soviet Union asking people about their notion of erotics — variously referred to in the piece as erotic love, erotic romance or just plain "erotics". "Erotics is culture", says one male city dwellIer, and in the Soviet Union we have no culture therefore we have no erotics; all we have is good fucking. The women working in underground tunnels say they have no time to think of such things; three young soldiers say they have no idea what it means; one woman says it's how she feels about her family (cuffing her son on the cheek); a man and woman worked for a production house which made porn to show to the Soviet bureaucrats; some middle-aged men are filmed cavorting in the public baths in their jocks; an old peasant says it's pinching young girls on the breast, "you braggart!" says his wife. Funke Stern's video conveyed a sense of the distance between the foreign filmmakers and the people they meet, and the awkward, cheerful negotiations between the two parties. Formally, the approach of asking a question but improvising according to the reply made for one of the least predictably structured works of the festival. I have not seen a documentary as good as this on any of the questions raised by feminism. Funke Stern's piece had some affinity with *Un Chien Delicieux* (Ken Feingold, USA,1991, 19mins) — a kind of wide-eyed relativist approach to the people in front of the camera. *Un Chien Delicieux* is apparently a documentary in which a Burmese tribesman relates his encounter with Breton and the Surrealists in the late 40s in Paris and their reaction to a meal he prepared them. The rough and ready camera work seems to confirm the video's veracity and it becomes a full blown test of cultural relativism when it documents the killing, skinning, cooking and eating of a dog. The rigour of its aesthetic to this point falters when the killing of the dog is softened by strobing.

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The video animation program featured a work called *Star Life* (Philipe Andrevon, France, 1990, 5 mins) which was screened three times during the Video Festival and excerpted on TV. This predictably cute piece of animation with Hollywood stars keyed into scenes of ordinary consumer life (the bus stop, the supermarket etc.) is characteristic of the pop side of video and of much contemporary experimental film — the display of 5 mins of ironic attitude about some aspect of contemporary living that everyone already jokes about. There were abundant examples of this kind of work throughout the experimental programs and most of them were considerably more interesting if just as cute as *Star Life* . One surmises that the high profile given to this work was due to the interest the audience is presumed to have in any picture of a Hollywood star (*Star Life's* idea is hardly remarkable and a hi-tech version of it is current on Australian TV in the form of a Pepsi ad with James Cagney and Humphrey Bogart: this type of advertising was tremendously popular on British TV in the mid 1980s). Among the more memorable comic works were *eddie d. presents* (Holland, 1991, 5mins) in which everyday sounds — toast popping, motorcycle revving — were rhythmically edited and Ian Andrews' *The Harm Machine* (Australia, 1991, 11mins) which, like *Star Life*, tapped into Hollywood iconography (in this case, B-grade 50s sci-fi film). *Uranus* (Michael Hill, Australia, 1990, 11mins, b &w) cunningly used a smart-aleck male persona to list, in eleven minutes, the supposed dispositions and predicaments of things and persons under the sign of Uranus, juxtaposing this list with incongruous black-and-white images (underwater shots of deep-ocean fish, for example). In all these works, however, the irony lapsed into the smug.

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In the program commemorating The Kitchen's promotion of new arts — one of three curated American programs — there was an extended series of alternative-style video public service announcements. These run of the mill political ads when watched in the format presented — in two sets of seven 30 sec-2 min ads and positioned between a few longer and for the most part also community-minded works — made for the best argument against political art I have seen. The mini-narrative of the single mother, the inevitable quirky gay romance with safe sex promo, the messages against censorship, enironmental poisoning, sexual harassment, punctuated with the heavy clang of monumental doors shutting and the giant titles DIRECT EFFECT, had the ghastly effect in the Festival context of providing a supermarket's range of social issues. This amalgam of topicality, liberal concern and the 'experimental' is par for the course in contemporary film festivals. What made its shortcomings more irritating in this video context was the speed with which each ad (and therefore each socio-political message) followed the other, and the fact that this block of work constituted the most coherent or consistent 'alternative' to the ambient poetics of standard video art. A further peculiarity was that their major structural/formal difference from your

everyday TV ad was the packaging of each excerpt with full production details, crew and director credits and in most instances, funding acknowledgements. One felt glad of the anonymity of ordinary TV commercials in contrast. Indeed, the social world depicted in the Direct Effect ads, far from being ignored, is standard fare in the mass media — from *LA Law* to *Cop Rock*, not to mention every second piece of journalism and/or Hollywood film.

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There has always been a video art of technological enthusiasm, a Red Guard faith in a New World Order of Synthetic Imagery. In its sombre form, this sort of video work demonstrates the logistics of 3D design. There's a kind of desperate gloom about these geometric fantasies — in this festival exemplified by the truly awful *Mt. Fuji* (Ko Nakajima, Japan, 1984), with its spinning cosmic cubes made up of views of Mt. Fuji. The work of the Fearless studio (Cathy Vogan, Robert Cahen, Dominik Barbier) in Paris lumbered under the same heavy panoply of digital metaphysics, in this case, in gothic form. In its cheerful form the art of video animation and digital effects is mostly the product of desk-top video or what Ross Harley calls in the Festival catalogue "garage tech". "All that remains," Harley says, "is to invent the artistic methods that correspond to the ever-shifting horizon of technological possibility". However, what is most impressive when you sit through technologically avant-garde video programs is how established, in fact, a certain artistic method is among them, how limited its possibilities are, and how predictable its results. It is true, as the perennial feminist plaint "boys and their toys" goes, that most of this kind of art is produced by men. I suggest, however, that the schism be seen not as one between a masculine art of technical experimentation and a feminine art of beauty and emotion but rather between two artistic projects: the first, a project with preoccupations derived from science fiction and also (for reasons I can only guess at, such as the origins of sci fi in tales of pulp fantasy) gothic literature; the second, concerned with personal expression conceived in the most traditional manner as a sensual lyricism. In the first instance it's clear that the heritage of sci fi, fantasy and gothic imagery could and should be producing work far more interesting than we are seeing — though the allegory *Maxwell's Demon* (James Duesing, USA, 1991, 8mins) on the animation program was quite satisfying in these respects. I'm not sure that there's anything inherently meritorious about the sensualist project and I'm absolutely sure that's there's nothing peculiarly womanly about it. Bill Viola is probably the most influential exponent of this kind of video art.

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The video animation program opened with Jill Scott's *Continental Drift* (Australia, 1991, 12mins), an attempt at combining personal lyricism with digital effects. Despite the fact that the subject was the artist's own experience of breast cancer (and therefore one's sympathies were engaged) and despite the comparative relief of being treated to a soundtrack with human voice rather than a head hammering barrage of humming and grinding and howling sampled noises — this work was mawkish in all the "conventional" ways in which TV programs and films on this subject are mawkish: water is the symbol for the renewal of life, the voice recounts its experiences in the most maudlin tones and recovering from illness is used as a metaphor for the cathartic transformation of feminine experience. Despite its more reflective subject matter and contemplative pace I found a surprising correspondence between this work and the work of Peter Callas (*MCA Tape*, Australia, 1991, 4.30mins) viewed in the same program (as well as his installation *Our Potential Allies*, 1980 & 1991, 15mins, at the Ivan Dougherty Gallery). These works are tokens of the kind of video art in which, behind the veil of digital effects, the artist's idea is no more than a slogan or heart-warming message.

Vibration, Inscription, Mostly Transmission

Douglas Kahn

The history of sound in the arts can be easily traced through the phonograph, radio or any technology with bulk, including the misogynoids designed to *fin de siècle* specifications by Villiers (*L'Eve future*) and others. Beyond that, three figures of a more abstract character can be detected — vibration, inscription, transmission — that *begin* to account for how sounds are located or dislocated, contained or released, recorded or generated. One would want to at least begin in some way because the normal ways don't help. The incidence of sound in the arts, much more extensive than ever taken into account, was all over the place, in what now would be called an interdisciplinary way, everywhere but channeled into a libidinal plumbing that would tap the heart of a discrete history. Figures can cut a figure across media, disciplines, movements, and biographical novels, whatever way histories may be grouped, and give shape to those other figures — objects and bodies — and the spaces they inhabit. This in turn could aid the project of discerning an epistemology of sound and aurality less laden with visualist clutter, by getting a sense of where certain things are strewn and projects are potentiated, after all, for an epistemology of sound to be possible there needed first to be a discursive practice, let alone the artistic one that most immediately concerns us here, of sound as such, and that was the recent product of an amalgam of discursive practices and institutional realities of approximately the last dozen decades in the West, i.e., after a Christian hiatus of a couple millennia. In the late-nineteenth century, amid a last gasp of neo-Pythagorean thought fed again by technological, scientific and spiritist developments and amid an unfolding range of thought fixed by technological acts and desires, there was for the first time a noticeable cultural frequency of the notion of sound, whether in a dependent status as with synaesthesia or a more autonomous status achieved by the containments of phonography. Respectively, there was a reassertion of a larger spatial status of sound along, a cosmological place for sound in the age of imperialism, with a new assertion of a plenitude of *all* sounds. To accomplish the latter, phonography departed from the anthropomorphic conceit of sound as voice and music to indiscriminately invoke and equalize sounds into sound. It is important to note that this would not prevent the anthropomorphism at the heart of the avant-garde's strategic musicalization of all sounds from Russolo through successive generations of Cageans.

For Jim Pomeroy (1945-92)

The figure of vibration was most pronounced in ideas of synaesthesia, which were widespread within French circles in the late-nineteenth century, cropping up again among Russian artists around the second decade of the century, even as Kandinsky and Kublin moved to the German site of *Der Blaue Reiter*, then again in the abstract "visual music" films of the 1920s, coming to rest in mass culture when Oskar Fischinger's influence buttressed Bach in Walt Disney's *Fantasia* . This basically neo-Pythagorean impulse, wherein the laws of vibrating strings reverberated to harmonically map the Universe and place everthing in it, was aided by concurrent occult ideas of a cosmic coordination of essences, and scientific ideas that sound and light were distinguished by calibrated degrees of the speed of vibration. Actual sound occurred in synaesthesia primarily as speech and music, i.e., characteristically pre-phonographic sounds, i.e., excluding worldly sound, as well as sounds that are *uttered* instead of heard, thus the familiar solipsism. Phonemes and tones in synaesthetic sound systems might correspond to each other, to colors, to the regulated timbre of sound colors, to personality attributes, or to the meaning of phenomenal or cosmological traits. But wherever sound occurred it was always manifested elsewhere, or other things were manifested through it; a sound had no autonomy but was always relational, being somewhere or something else, a constant deflection that ultimately stretched out to spiritually organize everything from essense to cosmos. Synaesthesia thereby subsumed the terrestrial world and its inhabitants only in the abstract. Vibrations through their veritable movement of deflection and deference, generated a structured space and situated bodies and objects relationally in that space, without outwardly transforming them in the process. There were no mutations or fusions, no surfaces were disrupted from either external vibrations or internal emanations, and there was no terrestrial anchoring that could have marked them with the wiles of the world . Marcel Duchamp later satirized the inability of vibrational space to generate stable objects and bodies with his idea for an acoustic Venus de Milo, a life all her own but existing in neither flesh nor stone.[1] Similarly, in one of Raymond Roussel's novels the names of flowers called out into a ravine echo back accompanied by their respective scents. But still there was Kandinsky.

Although most figures of vibration evaporated out into the heavens, an exception can be found in "Ka" (1915), a story by the Russian Futurist poet Velimir Khlebnikov. The story employed the type of determinism and universality found in synaesthesia yet it managed to stay on earth because of its unusual collapse of cosmological space into historical time. Ka is a mythic figure, a time traveler capable of taking different forms. Well into the story Ka is a bird flying near the source of the Nile, where he joins a circle of apes who sit around a fire reminiscing about the Roc bird. Then Ka fashions an oracular lyre, a remarkable instrument using a Pythagorean correlation between musical intervals and historical chronology, derived from Khlebnikov's "Tables of Destiny".

> Ka set an elephant tusk on end and at the top, as if they were pegs for strings, he fastened the years 411, 709, 1237, 1453, 1871; and below on the footboard the years 1491, 1193, 665, 449, 31. Strings joined the upper and the lower pegs; they vibrated faintly.[2]

Ka asks a beautiful female ape to sing and she takes up the lyre and begins singing a song of the Fates.

> She moved her hand across the strings; they sounded the thunder boom of a flock of swans that settles as one body onto a lake.
>
> Ka observed that each string consisted of six parts, each part consisting of 317 years, 1902 years in all. And also that the top row of pegs indicated years when the East attacked the West, while the pegs at the lower end of the strings indicated an opposite movement, the West against the East. In the top row were the Vandals, Arabs, Tatars, Turks, and Germans; below were the Egyptians of Hatshepsut, the Greeks of Odysseus, the Scythians, the Greeks of Pericles, the Romans. Ka attached one additional string: between the year 78, the invasion of the Scythians of Adia Saka, and the year 1980 - the East. Ka studied the possibilities of playing on all seven strings.[3]

Inscription

Figures of inscription pulled all sounds down to earth, where they were stitched onto its surface. Figures of vibration were never accompanied by a dramatic new technology, just the monochord, whereas inscription could claim the phonograph and the phonautograph. Schematics of vibration were lodged either in concept or the heavens; vibrational etheriality was given credence by the simple existence of musical pitches and phonemes (bereft of dissonance and most consonants), which themselves had not been transformed by their enlistment in these schemas. Whereas the inscriptive nature of phonography was as evident as the jagged line that the stylus etched onto lampblack, paper, tin or wax, the transformation was one of a complete change of register, from spatial to linear and graphic, from movement to stasis. Inscription could transform any sound, even a very distant or dead one, not just the limited range of synaesthesia, and thus brought culture

out of the silent era, i.e., the silence between the sphere of human activity and the celestial spheres.

Figures of vibration were based in orality whereas inscription was scriptural, literally so: that sound could be seen spawned the idea that the inscription could be read and written and, therefore, could constitute a mechanically precise alphabet of all sounds, including previously nonexistent sounds. These hopes first arose at the center of technological culture; e.g., the year after the invention of the phonograph the technologist Alfred Mayer felt compelled to warn against phonographic writing for it was futile:

> ...to hope to be able to *read* the impressions and traces of phonographs, for these traces will vary, not alone with the quality of the voices, but also with the differently-related times of starting of the harmonics of these voices, and with the different relative intensities of these harmonics.[4] (1878)

Nevertheless, the same hopes were repeated much later in the avant-garde. In his1922 *De Stijl* article "Production—Reproduction" László Moholy-Nagy wrote

> An extension of [the phonograph] for productive purposes could be achieved as follows: the grooves are incised by human agency into the wax plate, without any external mechanical means, which then produce sound effects.... The primary condition for such work is laboratory experiments: precise examination of the kinds of grooves (as regards length, width, depth etc.) brought about by the different sounds; examination of the man-made grooves; and finally mechanical-technical experiments for perfecting the groove-manuscript score. (or perhaps the mechanical reduction of large groovescript records.)[5]

He later attempted to realize this idea using the visible lines of recorded sound that run along the edge of optical sound film. In his *The Sound of ABC*, one attempt among a genre of "drawn sound films" in the European avant-garde during that time, graphic figures such as letters, lines and profiles were scratched onto the sound track and then played back through the projector. With respect to previously nonexistent sounds: he was known to ask people, "I wonder how your nose will sound?"[6] Noses have sound but not in this sense. Rilke expected to hear the hitherto unheard *primal sound* of a phonographically decoded coronal suture atop an alas-poor-Yorick skull repeated from an unkown source: Rilke/Rille. A film in which drawn sound was employed, along with other techniques of manipulation, was *Romance Sentimentale* (1930), usually attributed only to Grigori Alexandrov but, argueably, Sergei Eisenstein was also quite involved, even as he tried to dissociate himself from it because the film was such a failure.[7] The American film critic Harry Potamkin talked with Alexandrov about his "playing with sound."

> [Alexandrov] has done in this film a number of things I have thought basic in "playing with sound", such as: running the sound–track backwards, inscribing or designing the sound (sound is afterall only inscription). He cut the sound inscription.
>
> ....Alexandrov, so he told me, has played with the designs of sound by inscribing it directly on the negative and allllowing light to make the final registration..... By studying the inscriptions closely one may come to an exact knowledge of these inscriptions and read them as easily as one reads musical notes for sound. The inscription for speech and that of sound differ only in the composition of the intervals and a close student will come to recognise the peculiarties of the different impressions. Actually sound will be created without being utttered![8]

The earliest marked example of this type of inscription, however, was a scene in Raymond Roussel's novel *Locus Solus* (1914) where the delerious Lucius Egroizard, expert craftsman and devotee to the legacy of Leonardo da Vinci, attempts to phonographically write the voice of his daughter who had been viciously trampled by bandits dancing a jig.[9] If anything would bring his one-year-old daughter Gillette back from the dead it was her voice for so much is carried with it. The process he employed began with someone volunteering the words "*O Rebecca...*" sung over and over again. He then took a piece of fatty bacon that had been constructed into a miniature fathom, with slivers of red meat forming the measurement lines, that retained its proportions when compressed or stretched. He used this to register small points upon a green wax tablet with a golden needle. "Finally the green tablet showed a short, thin, straight line composed of short pricks resembling those on phonograph cylinders when a voice has been recorded on them." [193] He then lit a lamp flashing brightly at three second intervals, feeding the flashes through a faceted red garnet cradled at the center of a white card, focusing varying number of flashes (1-15) through different facets of the garnet upon the individual indentations already inscribed on the wax tablet, thus forming them almost imperceptibly, with the subtle variations in warmth of the red light and green wax, as subphone-

mic elements in "the future quality of the embryonic sounds." [194] After carefully modeling each indentation separately, he ran a hand-held phonograph over the resultant line on the tablet, repeating a close simulation of the original "*O Rebecca...*" just as the phrase had initially been repeated by the volunteer.

> It appeared that the madman artificially created all sorts of human voices by the process submitted to our eyes. In an effort to recover the voice of his daughter in her first attempts to talk, he multiplied the trials, hoping to discover by chance some timbre which might guide him towards success by approaching his ideal. [195]

He concentrated on the last vowel *a* and with another attempt created a "long, merry syllable which, ...recalling the smiling first efforts of very young children eager to talk..." [203-04], an attempt with other attempts at the simulation of her speech that paralleled the initial attempts of the child to produce her first words, the first letter of the alphabet at the end of the phrase. Finally, his efforts bore fruit, "Her voice...It's her voice...my daughter's voice! (...) It's you, my Gillette ... They haven't killed you... You're here...beside me... Speak, my darling..." [204]

There is a major difference between the work of Raymond Roussel and others in the early avant-garde, where sound is written on the *surface* of objects, and William Burroughs after WWII, where writing occurs submerged within a secretive *interior*, such as the site of genetic code, or in a way not easily readable, such as the reconfigurations of metallic particles on magnetic audiotape. It becomes difficult, after all, to read to things at a subcellular scale and it is just this type of scientistic thread that can enhance any agenda. There is another important relationship between the submerged inscription of sound and objects and bodies: inscription establishes the concreteness of "surfaces" in the interior that, in the process of reading or writing, may break through the skin or reconfigure the body (note the anomalous bodies in Burroughs' writings). Furthermore, as with genetic engineering, writing is a seed from which entire bodies may grow, but there also exists the possibility of severe mutation, injury and destruction, set off simply by the act of reading and writing, of bringing the text to light, of turning a body inside out to expose the inscription, a violence that accompanies a full technologization of the body.

Transmission

The main thing that figures of vibration shared with actual sound was space, albeit one that structured all that was within it in a rationalistic way. Actual acoustic space incorporates things with relatively little regimentation, because noise raises havoc with such resolve, therefore figures of vibration could only exist as an idealized version of how sound exists in the world of objects, bodies, noises and spaces. Inscription was tied to the mundanity of actual sound but destroyed acoustic spatiality by collapsing it into script and onto a static surface; sounds thereby gained autonomy from strict relationality but relinquished movement and any definitive space in which to move that was not also the movement of the object of technology. Figures of transmission combined aspects of both vibration and inscription, fusing the spatial features of vibration with the objecthood and corporeality of inscription. The space that had existed only in representation was given breadth and depth once again by a signal silently crisscrossing space, bearing both sonic content and the objects that had been demobilized by inscription. In other words, transmission was basically the return of objects and bodies that had been fixed by inscription to the space implied by vibration, acknowledging the breakdown of rationalistic relations among objects while, at the same time, returning to the totalizing impulse that comes with notions of space *per se* . Likewise, figures of vibration were based in mathematics and were thereby ungrounded whereas the acoustic recording of early phonography was a mechanics of the old style (thus the early bewilderment as to why the phonograph hadn't been invented long before). Figures of transmission, on the other hand, combined the two in an odd technology of the immaterial: transmission trafficked in the ephemerality of sound with like insubstantiality.

Transmissional space, however, was not acoustic; the distance between objects was a silent vacuum that collapsed space to an ideal of instantaneous dispatch and reception, a communication without mediation where sound nonetheless existed in at least two places simultaneously and where the objects and bodies that had been installed in sound by inscription were effortlessly transported. The fallacy of a lack of mediation in transmission had, in early avant-garde discourse and event, the benefit of diminishing the type of technical fascination that surrounded inscription, and pointing more directly to social interaction on a global scale; in other words, whereas vibrational space quickly became spiritual, and inscriptive surfaces easily became technical, transmissional space was predominantly political. This seems to be supported by the historical record, which, whenever wirelessness global relations occur, and when they aren't political, they're about love. The rest of the paper will survey some of this record.

First of all, wirelessness across the seas meant an accelerated collapse of everything on earth to a point in an instant and brought the potent force of an unstructured, chaotic space

hurtling down onto the given relations among objects and bodies, splintering them into fragments. Marinetti's "wireless imagination" credited wireless telegraphy with the collapse of syntax and analogy and the radical modulation of orthography resulting in his *parole in libertà*, words-in-freedom - all conventions of relationality, traditionally confined as they were to local and manageable structures and comparisons, would breakdown once they were bombarded with a new infinitude of possible relations, all arriving at once with a new found speed having "no connecting wires."[10] Marinetti's preoccupations with transmission ranged from combat to cooking. Marinetti's influential poetactics were nutured by militarism, by the aerial foreshortening of combat formations and military field maps,[11] the onomatopoetic recording of battle sounds, etc. And then there was his graphic poem, *Captive Turkish Balloon*, that documented a scene from the battle at Adrianopolis. The balloon signaled its sightings back to the ground like any surveillance balloon using TSF, i.e., wireless telegraphy. But when his fascination with the final fate of others was sated, he turned to technological delectations. In his "Nourishment by radio" –

> The really miraculous idea, which may even have escaped Marconi, is the possibility of broadcasting nutritious radio waves. After all, the notion is not so extraordinary. Since the radio can diffuse asphyxiating and sleep-inducing waves (lectures, jazz, poetry readings, to–conclude –ladies–and–gentlemen, etc.) it surely should be able to diffuse some extracts from the best dinners and luncheons. Then what abundance there would be! [12]

And just in case a radiophonic sound bite was needed to follow one of these meals:

Candied atmospheric electricities

> These dear and unforgettable "electricities" looked like little brightly-coloured bars of marbled soap, containing a sweetish cream made from indgredients that only an exhaustive chemical analysis would be able to define.[13]

Marinetti's ideas of wirelessness had their last hurrah with the well-known manifesto of radio, "La Radia" (1933), coauthored with Pino Masnata: "La radia shall be...The immensification of space No longer visible and frameable the stage becomes universal and cosmic."[14] In the manifesto they reveal Futurist radio art to be a "...pure organism of radio sensations," and thus to operate within prosthetic tropes, for "...we Futurists are perfecting radio broadcasting which is destined to multiply a hundredfold the creative genius of the Italian race." Here the body rushes in to replace the mediation voided by signal, but just as quickly, other bodies rush out, for Futurism had "overcome patriotism with a more fervent patriotism thus transformed into authentic religion of the Fatherland warning to Semites that they should identify with their various fatherlands if they do not wish to disappear."

For the Russian avant-garde, the transmissional collapse of space meant love and internationalism, and a certain malaise over the proximity of technology to capital. On his visit to the United States, Vladimir Mayakovsky sent numerous telegrams to Lily Brik. "I kiss you. I love you," and "I kiss you from Chicago. Lonely. I love you," and "Give me address in Italy. Lonely and bored. I love you kiss you." etc. The Russian Ego-Futurist Vasilisk Gnedov had indeed written in 1913 that "....even now the human membrane is capable of calling and answering sounds from unknown shores"[15] but this could provide Mayakovsky little solace, because the membrane was in fact only partially sensate. His other long-distance problem was reconciling the modernism of the U.S., typified by radio and wirelessness, with his lack of internationalist love for the state of the nation. On his visit to the U.S. he found the urban blight of Manhattan, shrouded with a haze of petty moralizing, to be inconsistent with the very existence of radio.

> ...it is dull here, while in our parts it is gay. Here everything smells of decay, is dying, rotting, while our life is boiling over, the future is ours...We are walking now through one of the richest streets in the world [Fifth Avenue] - skyscrapers, palaces, hotels, shops, and crowds. But I have a feeling I am walking among ruins, and I am depressed (...) You don't have ...aspirations; you have only dirty little "moralizing," sentimental sniveling, as if one suddenly found oneself in the deepest provinces, in the Middle Ages. How can this kind of "moralizing" coexist with the highest technical achievement -I mean radio?[16]

Mayakovsky continued his examination of New York City in the poem "Brooklyn Bridge" (1925). In it he imagined the United States where: "Electric yarn / had supplanted steam -from it I see / what at that time they could do: send a winged machine / up to the skies, / in a big voice / to each other / roar on the radio."[17] Yet the class injustice of U. S. society was not lost on Mayakovksy: "... some carefree led their lives, others howled from hunger,"[18] the fruit of a "...futurism of naked technology."[19] But it was almost lost on him. In an earlier version of "Brooklyn Bridge" he sang the

praises of technology, how its girders uplifted other accoutrements of modernism, however, upon reciting it to a working class audience in New York an audience member yelled out from the balcony, "Don't forget, Comrade Mayakovsky, that unemployed men often jump off of that bridge into the water...."[20] Upon returning to the Soviet Union, Mayakovsky stated that the organizational task of LEF should be:

> ...not to extol technology but to curb it in the name of humanitiy's interests; not to look for aesthetic delight in iron fire escapes of skyscrapers but to arrange living quarters.... Not to extol noise but to put up sound absorbers we poets must talk in the cars. Flight without an engine, wireless telegraph, radio, buses which push streetcars out of the way, the subway which drives underground everything that could be seen above. Perhaps the technology of tomorrow, mutliplying man's strength a millionfold, will find a way to abolish scaffoldings, booms, and other technological surfaces."[21]

As mentioned above, Velimir Khlebnikov had brought Pythagorean cosmological space down to the earthly abode of historical chronology. In his key theoretical essay from 1919, "Our Fundamentals," he hoped that the nations of the future will pay heed to this prophecy-turned-science, that they will seek stability in how the stars are arrayed and find harmony in the strings that had structured earlier models of the universe. The music of the spheres, in other words, was to be model to international politics, as he says "...the harmony of strings can replace the disharmony of nations" It worked this way: starlight concentrated millions of miles and light years into a foreshortened pinpoint, a sign, a *signal* containing life, history and wisdom: "Let us suppose that a wave of light is inhabited by intelligent beings who possess their own government, their own laws, even their own prophets."[22] He then takes the trajectory of starlight as it traverses across the heavens to earth, as a wireless signal that better situates nations in accord with each other than their current terrestrial suspension which carries them puppet-like from the strings of the older, wired telegraphy and telephony.

> And is not the purpose of division to dismantle the wires of states and governments that intervene between the eternal stars and the ears of mankind? Let the power of the stars be wireless.[23]

Then, in his essay "The Radio of the Future" he finds other strings, standing at the top of a radio antenna like tossled hair and, "More obedient than strings beneath the violinist's hand, the metallic apparatus of Radio will talk and sing, obeying every marked pulse of the song."[24] The radio, he imagines, is not broadcast but sends its signal to one of many speaker walls set in a prominent city and village locations across the Soviet Union (following the agit-prop practices of ROSTA, the Russian Telegraph Agency). The essay needs an extended treatment; here is but one excerpt, a radiophonic anthem of production.

> It is a known fact that certain notes like "la" and "ti" are able to increase muscular capacity, sometimes as much as sixty-four times, since they thicken the muscle for a certain length of time. During periods of intense hard work like summer harvests or during the construction of great buildings, these sounds can be broadcast by Radio over the entire country, increasing its collective strength enormously.[25]

In 1928 Stalin had another type of national health mission in mind when he said that radio and cinema would cure alcoholism and displace vodka, "...the ulcer of society."[26]

For Guillaume Apollinaire transmission was at the root of the orphism/simultaneism he had formulated, in association with the work of the Delaunays and Blaise Cendrars (cf. the simultaneous phonographs in *Dan Yack*), and was directly manifested in many of his works. In his most ambitious graphic poem "Lettre-Océan" (1914) he referenced the *TSF* in Marinetti's *Captive Turkish Balloon*, but instead of the wireless within a system of military surveillance it was posed as a communication from the telegraph station atop the Eiffel tower to his brother across the Atlantic in Mexico (it would be another decade until the Mexican poets of Estridentismo would themselves take up wirelessness as an emblem of modernism). The poem "Cablepoem Abroad" (1920-21)[27] by the Ukrainean Futurist Mykhailo Semenko was similar to Apollinaire's constructed a poem, "Cablepoem Abroad" (1920-21),[28] where the global reach of the wireless was also that of worldwide revolution and the signal would carry a new universal language, naturalized by what fell under the signal's arche and by a common politics.

listen!
I pressed the button
50 parallel 50
Moscow-Himalaya-Kyoto
Our language—
Cities and mountains and seas and a field of snow
Words will be forgotten

It is constricting to think in details!
We will return to a collective thought
.....
Learn the language of the Future![29]

Once unleashed, the signal would not just revolve around the world:

To the technicians
An imperative decree:
1925
! RADIO—tram !
Earth ——
——MARS.[30]

In the 1916 story "The Moon King", Apollinaire constructed a keyboard whose diapason ranged radiophonically over the entire earth. When a key is pressed, Japan at dawn was heard.

> The flawless microphones of the king's device were set so as to bring in to this underground the most distant sounds of terrestrial life. Each key activated a microphone set for such-and-such a distance. Now we were hearing a Japanese country side. The wind soughed in the trees - a village was probably there, because I heard servants' laughter, a carpenter's plane, and the spray of an icy waterfall. Then another key pressed down, we were taken straight into morning, the king greeting the socialist labor of New Zealand, and I heard geysers spewing hot water. Then this wonderful morning continued in sweet Tahiti. Here we are at the market in Papeete, with the lascivious wahinees of New Cytheria wandering through it - you could hear their lovely guttural language, very much like ancient Greek. You could also hear the Chinese selling tea, coffee, butter, and cakes. The sound of accordions and Jew's harps...[31]

Then a train in the U.S., urban noises of Chicago, vessels along the Hudson, prayers for Christ in Mexico, carnival in Rio, a teacup in Paris, a chorus in Bonn, hand games in Naples, and finally ten o'clock in Tripoli. Then the "king's fingers ran over the keys at random, simultaneously raising all the sounds of this world which we, standing still, had just toured aurally."[32] In general, it is good to keep in mind Fanon's observation that radio was most often broadcast for the colonizers to maintain a sense of home, to keep them stalwart in their mission, while the colonized often ignored it entirely; cultural imperialism proper would follow.

The Martiniquen poet Aimé Césaire writing in his most Surrealist book, *The Miraculous Weapons*,[33] also has a wireless love problem. In the poem "The Automatic Crystal" he attempts to make contact with his love - "hullo hullo" - tries to transplant distant lands -"there are cicadas which deafen both their life and their death there also is the green water of lagoons even drowned I will never be that color" - and in attempting to establish intimate space he begins to confuse her with the technology:

> hullo hullo I would like to be on the clear other side of the earth the tips of your breasts have the color and the taste of that earth hullo hullo one more night there is rain and its gravedigger fingers there is rain putting its foot in its mouth on the roofs the rain ate the sun with chopsticks hullo hullo the enlargement of the crystal that's you. . . .[34]

Elsewhere Césaire see a larger melding of radio into an entire species, unfettered for having evolved from the air travel of our primal past:

> Radiolarians we drift across your sacrifice
> with a wavelike doddling I leap
> ancestral to the brances of my vegetation
> (from "The Thoroughbreds")

Fridha Kahlo was less intrigued with the technological regime that harbored wirelessness: in *Self-Portrait on the Borderline Between Mexico and the United States* (1932), electric cords connected to the dynamo, electric lamp and loudspeaker are sunk into the ground like the roots of weeds, threatening the fruits and flowers rooted in Mexican soil.

André Breton, too, takes up wirelessness in "The Introduction to the Discourse on the Paucity of Reality" where he begins with a brief discussion of the expression *wireless* which "...has too recently found its place in our vocabulary, has had too rapid a career, for much of the dream of our epoch not to go along with it; for it not to afford me one of those very rare and specifically new orientations of the mind."[35] The fashionably modern quality of the term provided an occasion for him to rethink the present while the intrinsic uprootedness of wirelessness allowed him to unfetter his thoughts. Before he proceeds too far in the essay he makes sure to mention what is excluded, what technology does not evoke — the sands of the shore, spiders, a willow tree, the sky — with their own abilities to evoke, after all, "the sky...is only an antenna with a wide range."[36] That given, he decides to rethink the present by choosing a different past. He imagines himself "...in

the vestibule of the chateau, lantern in hand, (throwing) the light on one after another of the gleaming suits of armour." The suits of armour transmit a "great mute coloquy" once they are put on, as though they are but death masks cast from other people's bodies. But the masks don't speak and the suits' ornate etchings are not phonographic incscriptions; the armour instead listens to the past. "Listen. Don't you still hear the galloping of horses through the country? The sun of the dead shines in vain, even for them, the living running always at full speed in aid of the unaidable. They make it an affair of state." Breton hears the past through these suits; he hears a voice, a woman's voice, another woman's voice and finally he puts on his own armour and speaks through it into the present tense of the text itself.[37]

In the fields of transmission the unknown expanses of the psyche were as intriguing and explorable as those on the earth's surface. The two were brought together in the pyscho-technics of Surrealist automatism. Inscriptive, stenographic practices took down the "magical *dictation*" from the "mouth of darkness" (Breton), the noisy gate to the unconscious,[38] but the action of the unconscious itself, its "voice", was delivered to the Surrealist by narrowcast. Even the literary voice privy to having overheard the unconscious could be described along these lines, as Louis Aragon did in his *Treatise on Style* (1928). First he describes the physiognomy of someone unable to hear such a voice: "...your ear trimmed with a festoon of *broderie anglaise*, your ear the color of calves' feet, your tender ear of rubber, your ear, ever as waxy and buzzing as a hive, your little dirty cartilege that looks more like a poorly puffed fritter than a phonograph horn..."[39] But when the ear that can hear is equipped with a sensitivity that, much like Apollinaire's keyboard, radiophonically spans the oceans it becomes ".....more and more able to grasp in the grassy hollow of sentences the clear tinkling of a clinked glass that causes a man to die at sea each time, and the same ceremony takes place, the sailors line up at the flag at half-mast, plop! the bag in the waves carries the sleeper away."[40] Likewise, the oracular voice of the unconscious was inverted into a vast subterranean region that could be heard residing on the other side of the earth's surface. In the course of discussing the "timbre" of Lautréamont's style, Aragon describes the work of the intellect as an acoustic mining.

> When the worker who was digging into the bowels of the earth—whether in knotty Asia or near the Italian sea, where the dust is lightest because it is made with the powder of statues—when this worker suddenly hears the steel of his pickax ring strangely, he bends over, questions the distant depth, and thinks he hears a dirge. To the bottom of the pit he glues an ear that is used to romances. What is this perpetual rumbling? A monstrous parade, an enormous troop which nothing wearies. Profuse resonance of subterranean carriages. The ebb and flow of hidden waters, where everything merges.[41]

Aragon's mining strikes an aqueous metaphor which continues to flow while he describes the automatic speech of the poet Robert Desnos during the Surrealist "period of sleeps': "He spoke like no one speaks. The great common sea suddenly found itself in the room, which was any old room with its surprised utensils."[42] Here, the subterranean waters "where everything merges" are themselves transmitted into the room through the buccal spigot of a "sleep talking" Desnos, as though he were but a puncture on the surface of the earth and of consciousness, a breach through which can be heard "...the echo of what we are tempted to consider as unversal conscience." (Breton)[43] Desnos was such an avid "sleeper" that he eventually pressed the patience of his listeners too far; as evidenced by the episode when an intolerant Paul Eluard, to awaken Desnos, emptied a jug of water onto his chest, fighting water with water. In 1932, several years after leaving the Surrealist ranks, Desnos replaced the transmission technology of his own body for that of radio broadcasting proper to create what he thought of as either an extension of poetry or a return to it radio advertising. "I threw myself passionately into the almost mathematical, yet intuitive, work of adapting words to music, of fabricating sentences, proverbs and mottoes for advertising, the primary exigency of this work being a return to the people's taste in the way of rhyme."[44] As his wife Youki Desnos recounts, "Robert's ambition — and how many times he repeated it to me — was outside of his pure poetic work, to create songs which could sweep through the streets, to be whistled by a boy pedaling a carrier tricycle, for example, or murmurred from ear to ear by lovers."[45] In other words, Desnos abandoned the "universal consciousness" that populated the unconscious for the crowded unconscious of "the People." Goods and services lodged in the bodies of jingles and songs were recorded into the minds of thousands of French people in order to be irrepressibly repeated. Desnos thereby socialized himself by radiophonically transmitting an entirely denatured "period of sleeps" and extending the transmitter from the pyscho-technical device of his own body to the crowd.

Edgar Varèse's most ambitious unrealized projects happened to be radiophonic in character and very much above ground. Beginning in Paris in 1929 and lasting for over a decade, he pursued the series of related symphonies named *Space, The Red Symphony, Symphony of the Revolution* and *The Astronomer*, collaborating at different times with Robert Desnos and Alejo

Carpentier, André Malraux[46] and with Antonin Artaud. The idea for radiophonic link-ups was formed between 1937-39; in an argument sketched out in 1941, he wrote:

> Voices in the sky, as though magic, invisible hands were turning on and off the knobs of fantastic radios, filling all space, criss-crossing, overlapping, penetrating each other, splitting up, superimposing, repulsing each other, colliding, crashing. Phrases, slogans, utterances, chants, proclamations. China, Russian, Spain, the Fascist states and the opposing Democracies all breaking their paralyzing crusts.
>
> (...) I suggest using, here and there, snatches of phrases of American, French, Russian, Chinese, Spanish, German revolutions like shooting stars, also recurring words poundingly repeated like hammer blows or throbbing in an underground ostenato, stubborn and ritualistic.[47]

Varèse's biographer went a little further in detailing his plans:

> Varèse had imagined a performance of the work being broadcast simultaneously in and from all the capitals of the world. The choirs, each singing in its own language, would have made their entries with mathematical precision. The work would have been divided up into seconds, with the greatest exactitude, so that the chorus in Paris—or Madrid, or Moscow, or Pekin, or Mexico City, or New York—would have come onto the air at exactly the right moment.[48]

In 1932 Varèse asked Antonin Artaud to supply a scenario about the earth's collision in 2000 A.D. with the star Sirius for *The Astronomer*. In response Artaud wrote *There is no more firmament* but the text remained unused and the fifth section was left uncompleted. Artaud adopted ideas about sound directly from some of Varèse's figurative formulations, specifically, the idea that sound could attain some type of mass, an object-like palpability. This can be found in Artaud's stage instructions for *There is no more firmament* where he has music –

> ....falling as if from a vertiginous height. Chords are struck in the sky; they dissipate, going from one extreme to the other. Sounds fall as if from a great height, stop short and spread out in arcs, forming vaults and parasols. Tiered sounds.[49]

In a 1936 interview about his "Space Symphony," Varèse talked about sound in the same way:

> I seemed to feel the music [during a performance of Beethoven's Seventh in Paris] detaching itself and projecting itself in space. I became conscious of a third dimension in the music. I call this phenomenon 'sound projection,' or the feeling given us by certain blocks of sound. Probably I should call them beams of sound, since the feeling is akin to that aroused by beams of light sent forth by a powerful searchlight. For the ear - just as for the eye - it gives a sense of prolongation, a journey into space.[50]

This practical projection into space was thought of by both Varèse and Artaud mostly in terms of loudspeakers, and with his Space symphonies he unleashed that into conceptions of radio. For Dane Rudhyar the very sound of Varèse's music immediately provoked scientistic/spiritual notions catapulting into outer space and the cosmos. "Every tone...is a molecule of music, and as such can be dissociated into component sonal atoms and electrons, which ultimately may be shown to be waves of the all-pervading *sonal energy* irradiating throughout the universe, like the recently discovered cosmic rays which Dr. Millikan calls interestingly enough 'the *birth-cries* of the simple elements: helium, oxygen, silicon, iron."[51]

In the script for Artaud's *There is no more firmament* the telegraph appears at the point of imminent annihilation to salve the earthlings' fears with the promise of a truly universal language. Over public loudspeakers comes the news:

> STUPENDOUS DISCOVERY. SKY PHYSICALLY ABOLISHED. EARTH ONLY A MINUTE AWAY FROM SIRIUS. NO MORE FIRMAMENT. CELESTIAL TELEGRAPHY BORN. INTERPLANETARY LANGUAGE ESTABLISHED.

Among the clamor of the crowds are heard scientists who are worried that space might be "..done away with," in fact "A Scientist shouts in a deaf colleague's ear, saying he has done away with space and gravity."[52] It seems as though the Scientist has discovered a device for "instantaneous radiation" even though it "...means the end of the universe." This instantaneous radiation is communicative; it is apparently the "CELESTIAL TELEGRAPHY" mentioned earlier. Despite the danger, the Scientist says "I have already begun signaling." At this point the curtain falls and behind it:

> The rumble of air savagely thrust back begins to swell up.

> Sounds rush forward, mude up of the blast of everal sirens at their highest point. Violent percussions intermingled.
> Cold light reigns everywhere.
> Everything stops.[53]

This is a good place to stop. One more thing: in order to translate the field of transmissional spaces—psychological and psychic spaces, the intimate spaces of love, international politics and the far reaches of the cosmos—into the present day it is important to remember that during the avant-garde it was understandable to think of wirelessness in terms of *communication*, despite the general underplaying of mediations and technologies, because it existed prior to contemporary mass media, i.e., the din where communication is accomplished through repetition and redundancy and, as such, has nothing necessarily communicative about it.

1 See Douglas Kahn, "Acoustic Sculpture, Deboned Voices" in *Public* No. 4/5 (Fall/Winter 1990/1991), pp. 23-34.

2 Velimir Khlebnikov, "Ka" in *The Collected Works of Velimir Khlebnikov, Volume 2: Prose, Plays and Supersagas* (translated by Paul Schmidt, edited by Charlotte Douglas), Cambridge: Harvard University Press, 1989, p. 67.

3 Ibid., p. 67-68.

4 Alfred M. Mayer, "On Edison's Talking-Machine," *Popular Science Monthly* (April 1878), p. 723.

5 See Krisztina Passuth, *Moholy-Nagy*. New York: Thames and Hudson, 1985, p. 289.

6 Sibyl Moholy-Nagy, *Moholy-Nagy: Experiment in Totality*. New York: Harper & Brothers, 1950, pp. 68, 97. Although it is unfortunate that this film is lost, the sound generated by this technique would probably have resembled a bird whistle of sorts, alternating with thin, scratchy sounds.

7 Buñuel concurs:

> Eisenstein's friends have tried to blame Alexandrov for the debâcle of the dreadful and shoddy production of *Romance Sentimentale*. But I saw Eisenstein making it with my own eyes, since he was shooting it on the stage next to me when I was making *L'Age d'Or*.

Cited in Francisco Aranda's *Luis Buñuel: A Critical Biography*. New York: Da Capo, 1976, p. 87.

8 Harry Potamkin, "Playing with Sound" in *The Compound Cinema: The Film Writings of Harry Alan Potamkin*. New York: Columbia University, 1977, pp. 86-88.

9 Raymond Roussel, *Locus Solus*. Translated by Rupert Copeland Cuningham. New York: Riverrun Press. Page numbers bracketed in text. For an analysis of *Locus Solus* and additional material on phonography, see my "Death in the Light of the Phonograph" in *Wireless Imagination: Sound, Radio and the Avant-garde*. Edited by Douglas Kahn and Gregory Whitehead. Cambridge, Mass.: The M.I.T. Press, 1992.

10 F. T.Marinetti, "Destruction of Syntax - Wireless Imagination - Words in Freedom", *Stung by Salt and War : creative texts of the Italian avant-gardist F. T. Marinetti* (tr. Richard J. Pioli). New York: Peter Lang, 1987, pp. 48-49.

11 See Linda Landis, *Futurist Cookbook* (tr. Suzan Brill), San Francisco: Bedford Arts, 1989, p. 67.

12 *Futurist Cookbook* , p. 67

13 ibid., p. 92.

14 Included in *Wireless Imagination*, op. cit.

15 Cited in I. B. Ignatyev, *Ego-Futurizm*, St Petersburg: St. Petersburg Herald, 1913. Reprinted as "Ego-Futurism" in *Russian Futurism through Its Manifestoes, 1912-1928* (tr. Anna Lawton and Herbert Eagle), Ithaca, NY: Cornell University Press, 1988, p. 127.

16 *The Life of Mayakovsky*, ibid., p. 375. in paraphrase by Michael Gold, then editor of the *New Masses*, reproduced in Witko Woroszyliski, *The Life of Mayakovsky* (tr. Boleslaw Taborski), N. Y.: The Orion Press, 1970, p. 375.

17 *The Life of Mayakovsky*, pp. 376-77. Similar to Charles Babbage's *The Ninth Bridgewater Treatise*, in which he imagines a state of global extermination over which the undissipated voice of the Negro cries out from the pains of slavery.

18 *The Life of Mayakovsky*, Ibid, p. 377.

19 ibid., p. 380.

20 Edward J. Brown, *Mayakovsky: A Poet in the Revolution*, Princeton: Princeton University Press, 1973, p. 282.

21 *The Life of Mayakovsky*, p. 380.

22 Velimir Khlebnikov, "Our Fundamentals", in *The Collected Works of Velimir Khlebnikov, Volume 1: Letters and Theoretical Writings* (tr. Paul Schmidt; ed. Charlotte Douglas), Cambridge: Harvard University Press, 1987, p. 387. This bears an uncanny resemblance to the relationship of light and sound in Raymond Roussel's early novels and writing method. However, whereas Khlebnikov comes to the transition from vibration, and thus is more easily transferable to the spatialities of transmission, Roussel sits definitively on the side of inscription.

23 ibid., p. 390.

24 Khlebikov, "The Radio of the Future", ibid., p 395.

25 ibid.

26 Anatoli Lunacharsky, "Speech to Film Workers" (1928) in *The Film Factory: Russian and Soviet Cinema in Documents*, (edited and translated by Richard Taylor, coedited by Ian Christie). Cambridge, Mass.: Harvard University Press, 1988, pp. 196,215.

27 Myroslava M. Mudrak, *The New Generation and Artistic Modernism in the Ukraine*. Ann Arbor, Michigan: UMI Research Press, 1986, pp. 162-170.

28 ibid., pp.162-170

29 Ibid., p. 169.

30 ibid., p 170

31 Guillaume Apollinaire, "The Moon King" in *The Poet Assassinated* (tr. Ron Padgett), San Francisco: North Point Press, 1984, p. 80.

32 Ibid., p. 81.

33 Aimé Césaire *The Collected Poetry*, (tr. Clayton Eshleman and Annette Smith), Berkeley: University of California Press, p.123.

34 Ibid., p. 99.

35 André Breton, *What is Surrealism?* New York: Pathfinder Press, 1978, p. 17

36 Ibid.

37 This type of return to the present also existed in Mayakovsky's "Brooklyn Bridge" when the geologist who reconstructs the remains of New York City unearths the fact that Mayakovsky himself wrote the very lines "syllable by syllable."

38 André Breton, "Entrée des médiums" (1922), excerpted and translated in Marcel Jean, ed., *The Autobiography of Surrealism*. New York: The Viking Press, 1980, p. 101.

39 Louis Aragon, *Treatise on Style* (1928) (tr. Alyson Waters), Lincoln: University of Nebraska Press, 1991, p. 106.

40 Ibid., p. 106.

41 Ibid. p. 103-104.

42 Ibid. p. 104.

43 Breton, "*Entree des mediums*", op. cit., p. 101.

44 Quoted from Robert Desnos *Etat de Veille* (Waking State) in Mary Ann Caws, *The Surrealist Voice of Robert Desnos*, Amherst: University of Massachusetts Press, 1977, p. 9

45 Youki Desnos, "Desnos poete populaire", *Simoun*, No. 22-23, 1956, pp. 52-54,

46 Ferdinand Ouellette, *Edgar Varèse*, London. Calder and Boyars, 1973, p. 133.

47 Dorothy Norman, "Edgar Varèse: Ionization Espace" in *Twice a Year*, No. 7 (Fall-Winter), 1941, p. 259-60.

48 Ouellette, op. cit., p. 132.

49 Antonin Artaud, "There is No More Firmament," *Collected Works*, Volume 2 (tr. Victor Corti), London: Calder & Boyars, 1971, p. 79

50 "Varèse Envisions 'Space' Symphony' ", *New York Times*, Dec 6, 1936 Section 2, p. 7

51 Cited in Henry Miller, "With Edgar Varèse in the Gobi Desert", *The Air-Conditioned Nightmare*, New York: New Directions, 1945, pp. 170-171.

52 Artaud, op.cit., page 91.

53 Ibid, page 92.

About Reduced Hearing

Ashley Scott

What follows forms part of a larger project pertaining to the process and characterisation of sound perception. Since the principles of the project follow a simple logical order it seems possible to present this fragment in isolation, even though in this form it may only succeed in connecting a number of references.

My aim is to develop a theory of "sonic types" which are intimately connected to perception, in that they are derived from meditations upon *perceptible* difference, in the absence of the usual criteria of meaning or of acoustic science. This is intended to produce a system allowing intuition and notation of sonorous examples as auditory phenomena — inseparable from the acts which perceived and defined them.

This is a major undertaking (which leads towards a knowledge of the fundamental characteristics of the field of music and audio arts) and only some basic postulates defining situations and acts of aural perception are detailed here. Perception, intuition and judgement (rather than acoustic facts) are my starting point derived from the theory associated with Musique Concrete which was formulated over a period of some years by the founder of the *Groupe de Recherche Musicales* , Pierre Schaeffer and others.[1] This was most importantly, theory developed in close association with experiment and composition in the studio — ie, in coordination with the practices it set out to found.

Preliminaries

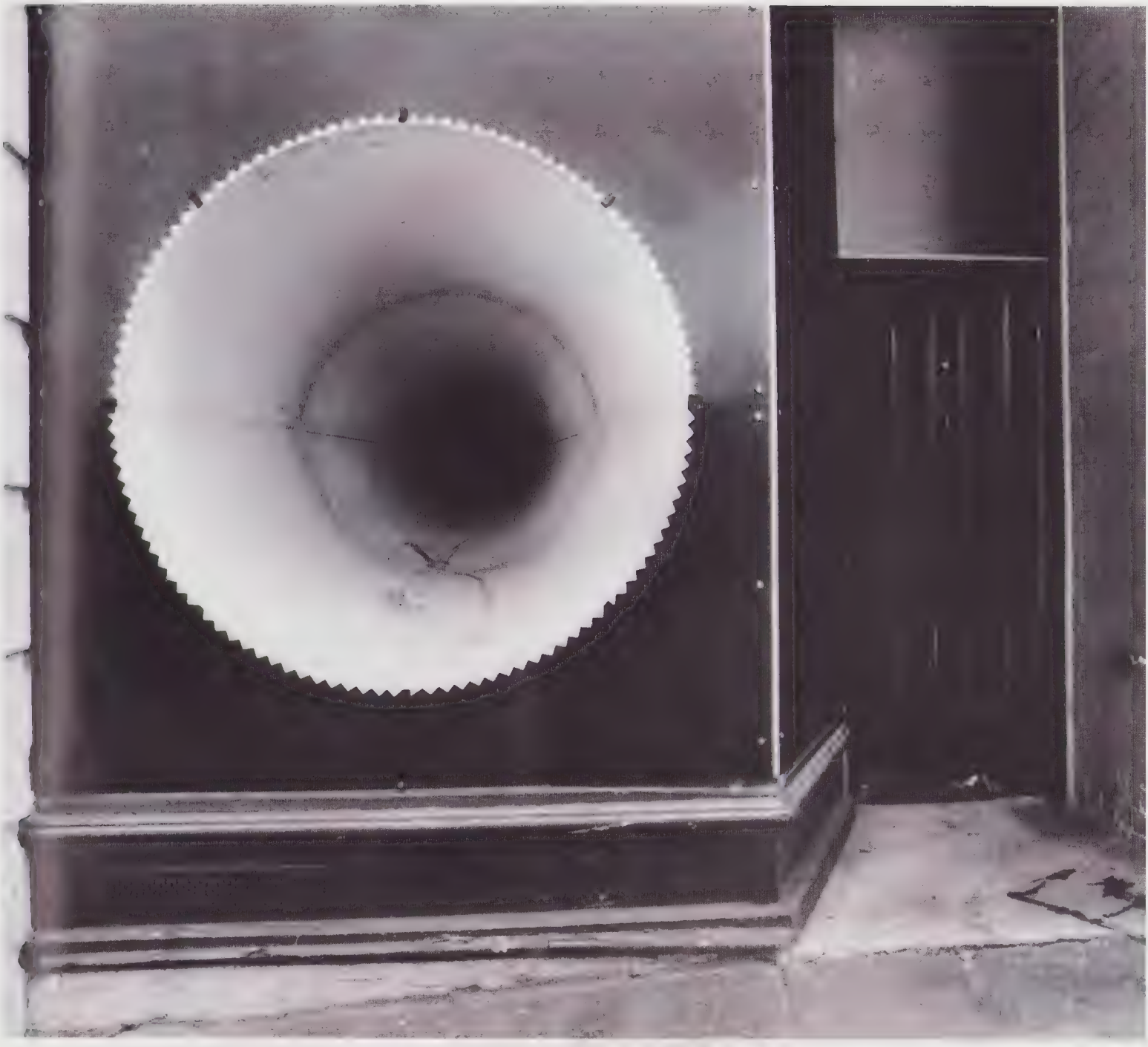
We have to characterise a field of hearing within which an artist perceives, comprehends and works in order to follow a path similar to the one Schaeffer proposes as "reduced hearing". We can find a way into such a field if we populate the activity of listening with certain objects both empirical and derived, in order to define the critical relations apparent in different situations of hearing.

Initially, there are the empirical relations into which one can decompose any instance of audition:

a) an **emitter** — a material object, machine or agent which due to some form of excitation or work transmits energy as audible vibrations. This is a result of intentional or natural causes — the emitter is the sound source, or sounding object.

b) an **emission** — what is given off, produced by the emitter due to some action. The emission is often characterised as a material (in a recorded spatial state) but it seems better to regard it as an energetic or vibratory "object" — as material as a signifier.

c) a **listening subject** — here dealt with as the site of perception and judgement; as the point where all this causality



Nigel Helyer, *The Lament*, Window Gallery, Wynyard, part of *Sound Cultures 1991*. Photo Heidrun Löhr.

comes to rest and the following *Listening Functions* are articulated.

The crucial relationship is of course the one between emission and listener which defines hearing in an empirical sense, allowing us to bracket the emitter and concentrate upon the emission as it is received by the listening subject. Thus we move from a focus on empirical causality, to a focus on intentionality, in which the emission perceived is equivalent to itself as such, and we can abandon the contexts where the concept of "noise" is disruptive, in favour of one where it becomes part of the signal.

Listening Functions

Now these categories are arranged in different contexts. The empirical situation, be it triadic (Emitter-Emission-Listener or dyadic Emission-Listener) has to be left behind in order to study the next arrangement, focussing upon the acts of the subject — the work to which the ear is put within the acts of perception.

Communication — the emission is interpreted, in conjunction with a code — in order to derive meaning from a sequence of sound. That is, the sound is treated as a message, which was formed and transmitted to be *understood*. This context is that of speech, intentionally-formed messages (dealt with in the semiotics of Prieto and Mounin for example). Our attention is focussed upon the explicit markings which culture has placed upon the sounds.

Signification — the listener interprets the emission for what it reveals of the emitter — what alerts and information are derived from the sound environment in the process of *recognition*. Again, this involves attention to the abstract markings which the listener perceives, but with more latitude. This area is best analysed by semiotics as conceived by Barthes or Metz as the study of the index.[2]

[Example 1. A tape recording of a jungle is played.]

Within that sample, there were announcements of warnings, presence and territory: it was rich in indicators, but no language.

[Example 2. A fragment of piano music is heard.]

Consider the perceptible aspects of musical form and instrumentation — the audition of music is included in this category as well — requiring the detection of structural and thematic clues.

These are categories which lead the subject to either *understand* or in the second case, *recognise* or interpret. [3] They require the loss of the vibrations which bore the markings, the information in the first place. In the well-known terms of information theory: cases a) and b) require the putting aside of the *Medium*..

It is the legacy of evolution within and of natural and cultural environments which convinces us of the absolute immediacy of meaning (coded for understanding) or reference (a result of apprenticeships in locations and milieux) — when these are really interpretative processes, where sound functions as a carrier of the *Abstract*.. This term is taken to mean: the markings which lead the subject's attention and intentions towards the interrogation of signs and indices perceived in the emission.

It would seem that acoustics accounts for the channel and the medium and the social sciences can deal with the abstract "contents": The world is complete and transmission secure with the modes noted above, but one has to realise the extent to which the social and scientific discourses have colonised our account of audible reality.

Reduced Hearing

There is also a third mode of aural perception, which Schaeffer adds to the repertoire of attention skills:

Acousmatic or sonorous mode, where the listener maintains a wilful ignorance of meaning or source, in an attempt to catch the emission as an energetic profile in time. This can be demonstrated:

[Example 3. A fragment of speech in a foreign language is played.]

Since no one understands this (it cannot be taken as a meaningful utterance — it does not communicate) the first mode is useless. It may however still signify the gender, temper, age and language-group of the speaker.

But if it is altered:

[Example 4. The previous example is played in reverse.]

We may begin to hear it as a "sound-entity", stripped of many of the significations just mentioned. This is the *Concrete* aspect of the example, a set of vibrations in the absence of meaning or reference. The point is that these characteristics were always present within the sample which was taken as immediately meaningful or vaguely suggestive — yet it has taken a great effort to recuperate this "concrete-ness".

The ideal egress to the immediate perception of the concrete, without all these elaborate procedures (or perhaps, presupposes

them) is provided by a *Reduced* hearing — one which involves the scanning of energetics from the first, leading to the reduction of abstract elements in favour of the concrete.

Concrete Music

The practice of Concrete Music was from the start, based upon two principles — it was sourced from the real world, be it studio or railway station. Secondly, considerable freedom of judgement was retained by the composer (in most cases) as an intuitive *listener*.

These conventions were formalised in the concept of acousmatic skills, in direct opposition to the "abstractions" of music theory, linguistics or acoustics (which are structural and explanatory discourse often presented as descriptive).

This analytic/attentive function of the ear (to listen for the concrete, to know the articulations of sound from within itself, so to speak) needed a mode of deployment, which Schaeffer found in an extension of the principles of musical *solfège*.

Traditional *solfège* is that complex of musical skills involving sight-singing (from manuscript), dictation (notation of musical sequences) and analytic hearing generally. It stands in a good position to combine the aural, graphic and theoretical skills of the musician.

Schaeffer proposes a kind of *solfège* by which the acousmatic listener might classify and notate their impressions of reduced sound events, as *Sonorous Objects*, mental correlates to the real, heard, emission.

So this acousmatic mode becomes a model rather than a metaphor. The term describes the Pythagorean initiates who received lectures from behind a screen — so that the speaker's gestures would not distract them from the meaning of his words. A certain irony lies in his choice of terminology, not the least of which is the inherently "statistical" character of music developed from concrete sources in comparison to the neat geometric order of Pythagorean musical theory.

In the contemporary "acousmatism" the meaning of a sound shall not distract us from its energetic profile, its concrete patternings. The question is opened — how effective a curtain is audio tape (or any other recording technology)?

[Example 5. Looped orchestra fragment, repeats several times.]

This is a *sillion fermé* (closed loop), the scratched record effect which Schaeffer claims firstly alerted him to the acousmatic mode. Repetition renders all but the surface of sound banal, to the point where it may disappear — and the imagination wanders over the contours of the sounds, taking in concrete aspects (which might be likened to the Distinctive features of Phonology) pitch inflections, balance of intensities, changing timbres....[4]

[Example 6.Another looped fragment.]

The sonorous object in its original sense represents a listener's *comprehension* of a sound (as opposed to their understanding or recognition), considered for these concrete aspects. A solfege based upon reduced hearing is thus a thought technology — a system of classing perceptions.

Demonstration

It may be instructive to demonstrate (or simulate), the basic method of segmenting a continuous stream of audible information — to isolate basic segments (which will differ according to the specificities of the sample) according to their energetic characteristics for closer study.

Firstly, let us consider three streams of acoustic information:

[Example 7. A word, phrase of a bird call, 3 musical segments: note, phrase and chord.]

These are large-scale segments, belonging to informative and significative situations. The musical segments seem the most flexible so far.

Now if we applied the acousmatic principle, noting the contractions and flows in the sonorous chain, and cut the sounds at points where the level ebbs we get:

[Example 8. A syllable, a call/trill, a chord or single note.]

What we notice, is that the sounds so cut or segmented, acquire their own concrete identities — pitch, intensity and duration inflected or stable according to various degrees within this segment — made against the normal flow of attention. This sonorous object has lost its identity as a relational element in a linguistic or environmental system and has taken on a newer, perhaps more positive identity, in a sonorous system of audible relations.

The *études* which Schaeffer himself produced are exemplary of a primitive state of such a system: generally based upon the possible articulations of a small set of sound sources (*Etude aux Allures* is exemplary here) — an economy of means is fairly crucial to the serious experimenter.

In conclusion, it must be pointed out that the examples and procedures outlined here are primitive — we are after all picking

up a technique after some years of neglect. In addition, it is important to stress that the art of reduced hearing only renders up a basis for an art (reduced sound) — A process of composition makes assemblages which might be considered complete by the artist — but the reduction of sounds is decisively suggestive and useful in this stage.

Sound art, in the absence of reduction, often seems limited to the piling up of transgressive or banal significations, chance discoveries and inadvertent operations upon the concrete base of these signals. That is to say, that this art form functions more often as literature or film on tape than anything else: a great many artists treat everything as a *message*. Another genre of work, which reproduces acoustic phenomena flies in the opposite direction — towards rarefaction and de-aestheticisation, separating an audience into acute or insensitive listeners, by bringing the audiometrics lab into the gallery (this happens most often in installation).

These are but two negative cases of a form which is not "materially"[5] self-reflexive — it runs out of room to move. The aim of prescribing yet another semiology, that of the reduced sonic aspect, is the extension of techniques available to the composer — it lays out *all* systems: music speech, sound media on the same level and immediately mixes up their protocols as well as their systems of structure and value. This aspect, of "leveling out" boundaries, in the interests of generalising perceptible difference — and as a method of assigning sonic identity beyond the constraints of cause — effect and "instrumental" reference would seem to demonstrate the value of such a theory.

1 The composer Pierre Henry and information scientist Abraham Moles were also involved from the earliest stages. The most important publications are: Moles, *Information Theory and Esthetic Perception*, Urbana: Illinois University Press, 1966 and Schaeffer's *Traite de Objets Musicaux*, Paris: Seuil, 1966. The main English Language sources are the booklet which accompanies the set of records *Solfege de l'objet sonore* Editions de Seuil, and the article "Sound and Communication" in *Cultures*, vol.1 no.1 p 53-83, UNESCO et la Baconniere, 1973.

2 References for these semiologies include Georges Mounin, *Semiotic Praxis*, N.Y.: Plenum Press, 1985; Roland Barthes, *Elements of Semiology*, London, Cape Editions, 1972 and Christian Metz, "Aural Objects", *Yale French Studies*, no. 60, 1975.

3 It goes without saying that the two modes interpenetrate (connotation, etc.) in fact, people never stop marvelling at this simple fact — the overexposure accorded to Artaud's radio piece seems to result from this, the manner in which voices signify as much as they communicate in the noise and accentuations which clothe the skeleton of language.

4 The sound object is imaginable in two ways — in an acoustic style, as the intersection of potentially continuous criteria (pitch, loudness and time — the trinity of measurement), or in a "phonological" manner, being described (comprehended) as a set of oppositions (be they binary, ternary, etc...) the phonological approach is taken by Robert Cogan in *New Images of Musical Sound*, Cambridge, Mass.: Harvard University Press, 1984.

5 The problem of materiality returns here: the outcome of the early post war rationalisation of music was essentially similar to (and preceding) the practice of minimal visual art: an interrogation of the medium to the greatest possible extent — followed by an enquiry into the social side of the form. One of the great contributions of 1950's Serialism was the conceptualisation (however Abstract) of "a sound" as marking a point of the intersection of audible parameters.

Automata

Paul Charlier

For quite a while it has been the tradition to commence most discussions on film sound with the idea that we live in a visual culture and therefore sound has been placed into a secondary position. That has never been my experience of cinema. Most films produced in the last sixty years have relied on and depicted large tracts of aural culture which still remain an enormous part of our collective cultures. No-one over that time has seriously suggested a return to silent films except for a number of visual artists, mostly in the late seventies, who said, "paintings don't have soundtracks, why should our films?". We know from our own discussions of the aural environment that the situations into which these works are placed, do indeed have "sound-tracks". Architectures, curatorial processes and presentation conventions re-construct the aural environment in which these "visual" works are viewed. Even silent experimental 8mm films are often screened with accompanying (non-sync) cassette recordings.

What I'll be presenting here is a work in progress. The presentation will consist of a number of "flares" designed to draw attention to some areas surrounding sound, cinema and audio-visual installations in an attempt to try and come to terms with the experience of cinema (and the vast array of audio-visual media, including installations) as an integration and interaction of sound and image-movement. The "flares" are

1. The mythological background for technologies of automata, cinema and audio-visual installations.
2. A model for an experience of cinema based on the experiments of Wilder Penfield.
3. The technological and social history of Automata.

All sound is the product of movement and all movement produces sound — even though some may be outside the range of human hearing. The aim of most sound reproduction is to move a speaker or set of speakers in a certain way and so move the air within a space and transmit vibrations through other surfaces. There are some exceptions to this which I'll mention in a moment — but sound and image-movement are intrinsically linked first. This seems to be a problem for some. We're so used to the constant delineation of "art forms" into their so-called "pure forms" that their recombination is often found to be problematic. You need only read any account or evaluation of early sound films or go to an industry seminar on film music to find examples and debate of these "problems".

Hephaestus

Technologies have mythological precedents. Hephaestus [known as Vulcan by the Romans] is central to the mythology and history of automata as well as the secrecy traditionally surrounding these inventions. Robert Graves remarks:

> It is not generally recognised that every Bronze Age tool, weapon utensil had magical properties, and that the smith was something of a sorcerer.[1]

There was a wide tradition throughout the ancient world of laming smiths to prevent their defection to the enemy.

Here is an extract from *The Iliad* describing the workshop of Hephaestus:

> She found him in a sweat, running about among his bellows, very busy; for he had twenty tripods to make which were to stand round by the wall of his room. He put golden wheels under the base of each, that they might run of themselves into any party of the gods and then run back home again. They were a miracle! They were nearly done, only the lugs had to be put on; he was just finishing these and forging the rivets [2]

> [Hephaestus] limped out leaning on a thick stick, with a couple of maids to support him. These were made of gold exactly like living girls; they have sense in their heads, they can speak and use their muscles, they can spin and weave and do their work by grace of God. These bustled along supporting their master.[3]

After Prometheus stole fire —

> Zeus swore revenge. He ordered Hephaestus to make a clay woman, and the four Winds to breathe life into her, and all the goddesses of Olympus to adorn her. This woman, Pandora, the most beautiful ever created. [4]

There is a story that Descartes built a beautiful android — a woman, which he called Francine. It is said that in fact there was a real Francine — an illegitimate daughter, but the legend is probably an identification of Descartes with Pygmallion who so hated women he carved an ivory statue to be more perfect than living women and to be his "bedfellow".

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Wilder Penfield

I'd like to quote a section from the biography of the Canadian neurosurgeon and neurologist, Wilder Penfield, who from the 1930's to the late 1950's was studying epilepsy. It is written by his grandson, Jefferson Lewis (beginnining with a quote from Mary Shelley's *Frankenstein*, "Thus strangely are our souls constructed"), and is entitled *Something Hidden.*.

> For the patient, the procedure begins with having one's head shaven bald then being wheeled into the operating room and placed on one's side on the table. The patient's head is then settled on a metal frame to hold it in place... The surgeon, or the surgeon's assistant, sketches the outline of the trap door that will be cut into the skull, then gives the patient a local anaesthetic. The brain tissue itself, though it readily recognizes pain messages brought to it along the web of nerves from the rest of the body, has no sensations. The surgeon now cuts through the scalp along the line that has been drawn, pulling back and clipping the skin to hold it in place, exposing the skull. With a hand or electric drill, five or six holes are made through the hard bone at each corner of the drawing. Then the surgeon passes a thin, flexible sawtoothed blade known as a Gigli saw down through one hole and threads it through and back up another. That done, the incision is completed and the trap door in the skull is removed. The three protective layers of tissue between the skull; and the brain are cut and pulled away, exposing, at last, the surface of the brain.
>
> The probing begins. Taking up the slender wire carrying a mild electrical current, the surgeon begins mapping the surface of the brain. Beside the patient is an assistant who acts as a relay to the surgeon above and behind, out of the patient's sight. Repeatedly touching the wire to the cortex (the surface of the brain), the surgeon looks for the points that control various functions: smell, sight, speech, the motor reflexes of arms and legs, etc.
>
> "What do you feel now?" the surgeon asks.

So, the patient is fully conscious — only a local anaesthetic has been used as the brain itself does not feel pain. The patient can describe verbally to the surgeon the effects of the "probing". Lewis' description continues:

> I feel a tingling in my left hand,' the patient answers. Now that the surgeon knows where the left hand is represented on the cortex, a small ticket is placed on that spot, and

> a note is dictated to the secretary in the observation gallery. And so it goes for the next hour, or more. Sometimes the surgeon won't need the patient's comment, as when the foot suddenly jerks of its own accord. Flashing lights and stars mean that the area concerned with vision has been found. A sudden inability to speak, or answer the surgeon's questions, means the centre of speech has been pinpointed.[5]

Penfield performed this operation, these experiments, for two reasons. He was trying to locate precisely the origin of the patient's epileptic fits, searching for identical responses to those that may precede the onslaught of a fit. He was also trying to locate other functions so that only those areas connected with the scar or tumour were removed, minimising loss of other functions. Penfield was himself opposed to gross forms of psychosurgery, especially those intended to change behaviour such as lobotomy, and was trying to be as precise as possible.

When stimulating the centres of speech, sight, hearing etc, the responses were sometimes chaotic, producing flashing lights or buzzing sounds. However, when Penfield began to explore the temporal lobe, he discovered something strange. The stimulations often evoked experiences like dreams or hallucinations . Often very precise auditory, visual (or both combined) sensations were evoked, as well as the other senses and emotional memories. In some cases, patients retrieved lost memories (corroborated by, for example, family members). Here are a number of patients' quotes from the transcriptions of these experiments:

> M.G.: Another dream. People were coming in and out and I heard "boom, boom, boom". [Later]: I don't seem to see them — I hear them. I don't hear them talking. I just hear their feet.
>
> Y.N.: There was talking or murmuring, but I cannot understand it. I heard the voices then I screamed. I had a feeling all over. Later: That man's voice again! The only thing I know is that my father frightens me a lot.
>
> R.B.: People's voices talking (They seemed to be far away). Now I hear them. A little like in a dream. Like footsteps walking — on the radio.
>
> D.F: I hear music. I hear the music again. It is like the radio.

This last patient (D.F.) later told Penfield:

> I thought you had a gramophone machine [in the operating theatre]. I thought I could see it. You did have one did you not?

D.F. later read about her own operation in a newspaper report and discovered for the first time that there hadn't been a record player in the room. She wrote to Penfield:

> There was no voice, but it was not just a tune. There were instruments — it was as though it were being played by an orchestra. Definitely, it was not as though I were imagining the tune to myself. I actually heard it.

In these experiments (which could rather be called "explorations") all types of sounds were heard by patients: footsteps, voice, music — and not merely memories of sounds. Some patients' descriptions also relate to technologies of dis-embodied sounds — such as radios and phonographs — technologies of "re-hearing". The sounds heard are often the most private sounds. Penfield's experiments both demonstrate and focus on the realm of listening to or hearing "non-actual" sounds or the evoked sensations of sounds. As Keiko Torigoe has pointed out, memories of sounds and imagined sounds are also part of the aural environment. It relates also to film sound designer Walter Murch's notion of "zero tracks" — where a sound is caused to be evoked within the mind of the listener.

Of special interest to me in constructing a model of the experience of audio-visual media is Penfield's concept of the "double mind", a "doubling of awareness". This is the sense that the patient was aware both of being in the operating theatre, and of other evoked sensations. For me, this "double awareness" is an important factor in considering the experience of cinema.

This "two minds" phenomena described by Penfield gives us a model with which to consider the experience of sitting in a room listening to the radio, in a cinema, standing within or in front of an installation. It is already found in a *de facto* form in discussions of Virtual Reality. In a recent television documentary on Virtual Reality, both the inner digital world as seen and heard by the participant (or "cybernaut" as I believe they are called) and their actual physical state with "eyephones" and "data-glove" and verbal comments were presented simultaneously, displaying the consciousness of the experience of the machine itself.

So it is not the illusion itself that I'm interested in here but our ambivalent relationship to the technology as we listen to and watch the illusion.

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Automata

The traditional history of cinema is optical: painting, photography, shadow plays, camera obscura, camera lucida, zoetrope, praxioscope, Muybridge, Edison, Lumiere and so on. Usually by chapter six, sound is added, focusing on the problematic transition to "talkies". There-after, sound — and therefore film as an audio-visual media and experience — is ignored again. For example, Kurt London in *Film Music* suggested that the earliest function of music within the silent cinema was to drown out the noise of the projector, and Hanns Eisler (with T.W. Adorno), has suggested:

> Music was introduced as a kind of antidote against the picture. The need was felt to spare the spectator the unpleasantness involved in seeing effigies of living, acting, and even speaking persons, who were at the same time silent.[6]

The sound film is obviously part of another history also: that of sound recording with its own traditions, histories, technical challenges etc. Moreover, these two strands (which intersect with the sound film) are themselves part of another history, of other audio-visual technologies such as "Automata". Automata provide a model with which to consider both cinema and the wider realm of audio-visual installations. Here is a definition of "Automaton" from *The Encyclopaedia of the Nineteenth Century*: "a machine which has the form of an organised being and contains within itself a mechanism capable of creating movement and simulating life."

Automata have been produced as religious items, scientific demonstrations, art objects and toys. Aesthetic impact has always been important and they have, for the most part, been produced as luxury items. Automata include: animated tableau, mechanical toys, mechanical gardens, automated musical instruments, speaking machines, and game-playing machines (such as chess machines).

There has often been a blurred line between the automata as marvellous mechanical object (celebrating craft, technology and control systems) and the re-creation of life (and the power that this implies). Tacitus described the Statue of Memnon in Thebes as a colossus of stone which gave out a vocal sound when the first sunlight touched it. The statue was hollow with an orifice at the back of the open mouth through which hot air forced itself at dawn when the sun warmed the stone. These elements are still a factor when speaking of film sound and music and the notion that these aural components "breath life" into the mechanism.

Hero of Alexandria (2nd Century BC) used automata to demonstrate physical and scientific principles and properties. In one such device, a fire is lit between two statues. The resulting increase in air pressure within the pedestal underneath causes water to flow into tubes, the weight of which causes the statues' arms to move and pour water onto the fire. As the Egyptians may have also done, Hero built singing birds operated by air-pressure ("warblers"). He also described a mechanical theatre — small enough to refute suggestions that a person was concealed within — employing similar mechanisms used in French mechanical tableaux two thousand years later.

By the 16th Century, automata combined the skills of the watch-maker and the sculptor. Most people are probably familiar with the large mechanical clocks with moving figures such as those in Bern and Strasbourg. Through the employment of the skills of puppetry and watchmaking, automata were created, which by the 19th Century were known as "androids".

In 1600, Gianello della Torre, (the Archimedes of his day), made automata for the amusement of royalty. He built a lady playing a lute moved along by wheels beneath her dress. Her feet are raised one after the other, the head turns from side to side and her left hand plucks the lute. Later, this type of automata were given "life-giving" details such as a rising and falling chest to create the impression of breathing.

In the 1735, Jacques de Vaucanson built a life-sized mechanical flute player capable of playing eleven melodies by moving the levers with its fingers and blowing through its mouth. He is most famous for his mechanical duck which reputedly walked, ate and defecated. Vaucanson, who had studied anatomy, was inspired by Descartes' ideas of the man-machine.

This form of automata reached its height in France between the mid-19th Century and World War I. The Vichy family produced a Pierrot writing at a desk — a musical automaton which dozes as the desk light dims, wakes up, turns up the wick and continues to write. Decamps produced a number of acrobats which were able to lift themselves up into handstands on chairs. In London, the Swiss watch-maker Maillardet produced a writing automaton in the form of a small child with a repertoire of four drawings and three poems in English and French. It is an extraordinary piece of work with three sets of cams on a single shaft controlling the writing arm and movement of the head and eyes. These automata, along with mechanical wall pictures with moving figures and musical accompaniment, are an overlooked part of the history of cinema as a technology of re-producing movement. Yet this interrelation of automata and cinema takes additional forms also.

Within the area of "sound studies", it is recognized that the history of voice recording is also part of the history of writing, of

transcription. Edison's phonogram was designed as dictation tool and was developed from work on a repeating telegraph. Within the history of automata (of which Edison is a part) there is a direct technical connection between the construction of writing and speaking automata.

Althanasius Kircher (1601-1680), was a Jesuit priest, who also inspired by the work of Descartes. In film histories he is mentioned as the inventor of a projector or magic lantern. But he is also credited with the development of an ear trumpet — an instrument with which to extend hearing. He also produced singing birds, figures playing instruments and a talking head. Thus is the history of all these technologies inter-woven.

The fascination with "talking heads" may itself come from the tradition of cutting off the head of enemy, celebrating with it in various ways and then consulting it as an oracle. After tearing apart the body of Orpheus, the Maenads threw his head into the River Hebrus where it floated down to the open sea calling the name of his lost love Eurydice until it came to rest on the Island of Lesbos where it was consulted as an oracle. Talking heads were also apparently produced by Roger Bacon (1214-1292) and Albertus Magnus (1206?-1280). Magnus' talking head is said to have been destroyed by Thomas Aquinas, one of his disciples. One version of the story states that Aquinas thought it a work of the devil and so destroyed it. Another version states that Aquinas smashed it to pieces because he was unable to bear its the unending chatter.

In 1779, the Academy of Sciences of St Petersburg held a competition for inventors to construct "A talking Machine which could pronounce all five vowels." It was won by a mechanic from Copenhagen but I have been unable to find a description of his device. Baron von Kempelen, another contestant, used bellows to drive air through different shaped tubes in an attempt to imitate the glotis. It was operated by a keyboard like a piano. Goethe heard this machine and reported that it could say a few childish words. (It was von Kempelen who made the infamous chess-player that is reported to have beaten both Napoleon and the Empress of Austria. It is thought however that it was probably a fake, concealing within a hidden accomplice.)

During the 1830's, a Professor Faber demonstrated a speaking wax model child called "The Euphonis". It employed a rubber imitation of the larynx and tongue and was worked by bellows operated by foot pedals and a set of keys to work the various sound. A writer in an 1845 of issue of *Chamber Magazine* remarked that it "was able to operate very skillfully, even simulating song." During the performance the operator was hidden. The title is derived from "euphony" meaning "pleasant sounding". In film sound theory this would be called the construction of a woman to produce pleasurable sounds.

Edison first took up the patent for a phonograph doll in 1878, producing them till turn of the century at rate of up to 500 a day. If the Egyptian and Greek statues that had hidden airways through which a hidden priest could speak might be described as the invention of ventriloquism, then these dolls may represent the invention of "post-dubbing". At the Paris Exposition of 1900 a special room was devoted to the Phonograph doll with girls recording at benches. An anonymous observer remarked:

> Each one sits before a large apparatus, singing, reading, crying, reciting, talking with all the appearance of a lunatic! She dictates to the cylinder of wax the lesson that the little doll must obediently repeat to the day of her death with guaranteed fidelity.[7]

Edison's dolls were improved upon by the Frenchman Henri Loiret who used changeable celluloid cylinders. Loiret also worked on the development of large loudspeakers suitable for playback of pre-recorded material in large public spaces. He demonstrated one such device, the Loiretograph, at the Paris Trocadero in 1897. As well as the problems of synchronisation of sound and image, the second problem that had plagued the early sound film was the problem of amplification.

It is figures like Kircher and Loiret (as well as Edison himself) that most clearly demonstrate the on-going connection between automata and the realisation of cinema. The next aspect of constructing this model is the development of mechanical gardens. They form the beginning of automata engaged from within — of which cinema is a part.

At the Paris Exposition of 1900 Raoul Grimoin Sanson demonstrated his "Cineorama" which he had patented in 1897. It was in effect the first flight simulator but moreover provides a model of cinema as an automata engaged from within. Ten cameras covering the entire horizon had been mounted in a balloon basket then flown over Paris. Ten projectors operated by a single winch handle projected these images onto a one hundred metre circumference screen. The audience stood in a large mock-up basket with a balloon above. However, as they were standing on the roof of the projection room — full of highly flammable nitrate film — the Paris police closed the demonstration after three days.

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I'd like to conclude with a comparison of some early reactions to the sound-film to descriptions of automata described above. The "double awareness" of the technology is always present. These reactions to early sound film tests and the first Vitaphone screen-

ings are similar to those concerning Virtual Reality demonstrations, and took place in similar "state-of-the-art" laboratories.

> Major Levinson was enthusing to Sam Warner about a short test film he had seen [at the Bell Laboratories] in which one could hear, actually *hear*, a piano being played while watching the pianist — even the audible snap of his glove buttons as he removed them came forth from the screen with breathtaking authenticity. [8]

Sam Warner (the so-called technical brother of the Warner Brothers) said:

> I had heard and seen so much about talking pictures that I would not have walked across the street to look at one. But when I heard a twelve-piece orchestra on the screen at the Bell Telephone Laboratories I could not believe my ears. I walked in back of the screen to see if they did not have an orchestra there synchronising with the picture. They all laughed at me.[9]

The following quotes are from a newspaper review of the first screening of Vitaphone shorts and the feature length *Don Juan*::

> The natural reproduction of voices, the tonal qualities of musical instruments and the timing of the sound to the movement of the lips of singers and the actions of musicians was almost uncanny. This "living sound" invention, without a musician being present...[10]

Concerning the introductory short of Will Hays congratulating Bell Labs and the Warner Brothers:

> There was no muffled utterances nor lisping in the course of the talk; it was the voice of Hays, and had any of his friends closed their eyes to his picture on the screen they would have immediately recognized his voice.[11]

Alexander Walker quotes one spectator as later observing: "No closer approach to resurrection has ever been made by science." [12]

It is important to remember in the light of this remark, that Edison dreamt of the phonograph as a device for immortalising the voices of the dead.

1 Robert Graves, *The Greek Myths*, Vol. 1, Middlesex: Penguin, 1960, pp., 87-88.
2 Homer, *The Iliad*, (tr. W.H.D. Rouse), New York, Mentor, 1938. p.223.
3 ibid., p.224.
4 Robert Graves, *op. cit.*, pp. 87-88.
5 Jefferson Lewis, *Something Hidden*, Toronto: Doubleday, 1981. pp.128-129.
6 Hanns Eisler, *Composing For the Films*, London: Dobson, 1947, p. 75.
7 Mary Hillier, *Automata*, London: Bloomsbury, 1988, p. 94.
8 Alexander Walker, *The Shattered Silents: how the talkies came to stay*, London: Harrap, 1986, p.6.
9 ibid., p.6
10 *The New York Times*, August 7, 1926
11 ibid.
12 Walker, op. cit., p. 11

The Nerima Silent Places Contest

Keiko Torigoe

The Nerima Silent Places Contest was planned and organised by the Division of Environmental Management of Nerima Ward in conjunction with the Soundscape Institute, Tokyo. Roughly speaking, Tokyo is divided into three big areas: the coastal area, the mountain area, and the area in between these two. This central area is divided into 23 wards. Nerima is located in the western part of this central area, and has a population of over half a million.

Each year the ward undertakes some type of environmental education project with a specific theme: in 1989, for example, the theme was water; in 1991 it was air. In 1990 the theme was sound. Events and workshops were held throughout the year, and the Silent Places Contest was the last project for the 1990 series, although it took about four months of planning and about eight months from the opening date of applications until the official announcement of the results. I participated in the project as an advisor, and as one of the judges. The other judges were Yutaka Shimada (a cultural ecologist), and Yoshiaki Ochi (a percussionist and the head of the division of Environmental Management).

The guidelines of the contest were as follows:

"Just as we have our own favourite places where we enjoy beautiful scenery, each of us must have a place where he or she finds his or her own special silence. Please let us know about the places where you enjoy your favourite scenery of silence. Where in Nerima Ward have you found this silence?"

Answers were to take the following form:

1. The name of the place where the silence was experienced
2. The contestants name for the silence

3. A description of the silence (in no more than 800 Japanese characters), including the reason for recommending the place.
4. A photograph, drawing or videotape of the place.

Yoshiaki Ono, who has worked for the Division of Environmental Management for a long time, described the aim of the project thus: "In our routine of work and noise, we felt the necessity for understanding the meaning and substance of 'silence' as the goal of our work, and for approaching the acoustic environment from the viewpoint of silence rather than that of noise."

I should point out that in Japan we define silence rather differently from the western understanding of it as the absence of sound. One of the silent places found by a local resident was a grove of ginkgo trees. The entrant was a woman about the same age as me, and she described this place as follows:

"One day when I was a child I was told that, shortly after the Second World War, a young man used to practice the trumpet at dusk on this ground. This story impressed me a lot. Now, every time I pass by this place, I feel as if I were hearing a sad tune which I have never actually heard."

As this example demonstrates, the reasons for which each place was recommended were deeply related to the very personal experience of the individual who chose it. Because of this, the judges were asked to visit each spot and to interpret these silent places in the context of a schema of more general types of silence. After considering the experiences of the entrants, we identified ten kinds of silence and eventually selected the ten silent places of Nerima Ward:

1. The dry moat situated in the ruins of Syakujii Castle. This was termed "The Silence of a Deep Forest". The entrant who chose this place did so because when he comes here he is reminded of the story of a powerful family who lived here hundreds of years ago until they were defeated in battle and their castle was burned down.
2. The precinct of Chyoumei Temple. This silence was termed "The Silence of Shrines and Temples". The entrant who chose this place was a seventy year old man who made his own *tanka* (a short poem) to describe it:

   In the grounds
   Of Chyoumei Temple
   Nothing but the cry
   Of a summer bird
   Interrupts the silence

3. The Sanpouji Pond in Syakujii Park. This silence was termed " The Silence of Plentiful Water" and was described by one of the entrants in this way: "The heroes of this space are water, birds, insects and the sound of the wind." In fact when I visited it I was surrounded by a surprising variety of natural sounds such as the water birds flapping their wings, and the sound of running spring water.
4. The Public Forest-Park of Acorns. The acorn is a kind of symbol of the indigenous plant ecosystem of this area of Japan. The entrant who chose it wrote: "Every morning I wake up at six o'clock and walk in this forest. When I walk over fallen leaves and breathe the fresh, chilly morning air, I actually feel — and appreciate the fact — that I am alive." When I visited this wood late one afternoon in February, I heard the lively voices of children playing. The resonance of their voices led me to superimpose the scenery of my childhood on that of this place before I was even aware I was doing so. This silence was termed "The Silence of Acorn Woods".
5. The Susugi River on the campus of Musashi University. This

place was chosen by some one who works at the university. When we visited the campus and met with people who worked there, they told us how they restored this scenery of silence which was characterised by the gentle murmuring of the stream. When the university was opened, this area of Tokyo still retained the original landscape of the Musashi tableland. A river for irrigation (which university people named the Susugi River after a poem Songs of an Old Fisherman' by the ancient Chinese poet Qu-yuan) once flowed across the campus. The university people loved the river and used it in their school lives in many ways. However

about thirty years ago the area changed from agricultural to residential. The river was blocked off and became a deadwater ditch.

Several years ago the university and its graduates raised money and brought the river back to life by means of a water circulation system. So this silence was termed "The Silence of Old Mushashi Fields".

6. The upper area of Musashiseki Park. This silence was termed "The Silence of Tranquility". When we visited this place it seemed to evoke countries such as Norway and Sweden. We found the atomosphere of this place to be quite different from that of indigenous places in this part of Japan. The main reason for this is the presence of metasequoia trees (an introduced species) on the island in the pond. We termed this silence "The Silence of the Metasequoia Trees".
7. The open space of lawn in Hikarigaoka Park. This silence was termed "The Silence Under a Wide Open Sky". Hikarigaoka Park is the largest of the parks in the central area of Tokyo. It was chosen by a woman in here thirties on the night when she went with her daughter to view the full moon there and was surrounded by the sounds of insects. To describe the space she wrote a poem called "The moon enjoyed on two nights by a mother and her child".
8. The public woods of Shimuzu Hill. As this is a type of silence protected by woods in the middle of a residential area, we name it "The Silence Protected by Woods".
9. The boat pond of Musashiseki Park. This silence was termed the "The Silence of Tranquility". The entrant who chose it was a nine year old boy who wrote: "I have chosen this place because there is a big pond surrounded by trees, and I can find many kinds of fish, like narrow-mouth and algashrimp, and many birds and..."

   This park is more closely related to our daily lives than other parks selected in the contest. When I visited it an elderly man was fishing quietly and young mothers were letting their two or three year old children play in the warm and peaceful sunlight.
10. The gingko trees I mentioned earlier. This kind of silence was described as ""The Silence of Nostalgia".

Results of the contest.

The project established that all silences are not the same and that silence can exist in various ways as appreciated by the residents of Nerima Ward. The soundlevel meter is not the only way to understand silence.

The kind of nature present at each place has an important effect on each individual silence. The features of geography and landscape — rivers, ponds, trees, woods, birds and fish — are all important factors making up a silence. And, as the wide open field and the full moon in the "silence under a wide open sky" show, visual and perhaps even olfactory features play a part in our appreciation of silence. Silence, then, exists as a synesthesia comprising our total sensations. Silence is formed not only by natural, geographical and biological factors, but also by socio-cultural factors such as people's activities, and local legend and history.

Although this contest was planned as an environmental education program, we could say that it worked as a new type of socio-audio performance art. I believe that the most important function of art is to make people conscious about what seems natural to them, or to reveal something important in their daily lives. As we have seen, this project led people to start looking and listening carefully and consciously at their everyday surroundings, to discover what they liked and to express themselves in poems and drawings.

When it comes to Sound Culture, we have to consider not only the sounds we create or we hear, but also the sounds of

which we are not conscious, or which we think we do not or cannot hear. Sounds of the past, sounds of the future, sounds in our memories and dreams — all these kinds of sounds should be included.

In the field of contemporary music, John Cage has already shown the significance of silence. We hope to approach the question of SoundCulture through silence, from the other side of sound. In the Nerima Silent Places Contest people did not find silence where there was no sound. None of the entrants suggested a sound-proof room, or even a graveyard at night. People found their silent places in a spatial and temporal situation in which they feel something rich as they communicate with the space through such sounds as the twittering of birds, the voices of insects, and the rustling of leaves.

The Canadian composer Murray Schaefer, who advanced the concept of soundscape, once made a statement that may be of significance here. In his *Tuning of the World* he writes: "In western society, silence is a negative, a vacuum. Silence of Western Man equals communication hangup. If one has nothing to say, the other will speak; that's why the garrulity of modern life has been extended by all kinds of sonic jabberware." What Schafer means by 'Western Man' here is, I think, a western appreciation of silence in the ancient and medieval eras.

On the other hand, he describes oriental silence as positive. Citing a passage by Lao-tzu he writes: "Give up haste and activity. Close your mouth. Only then will you comprehend the spirit of Tao. No philosophy or religion catches the positive felicity of stillness better than Taoism. It is a philosophy that would make all noise abatement legislation unnecessary".

Today, in Tokyo, noise abatement legislation knows almost no bounds. Tokyo is one of the noisiest cities in the world. For the last century, in the name of modernisation, the city and its people have changed completely. And our ears might have become even more westernised than those of westerners.

This means that the modern Japanese may well have lost positive silence. My fear of this, however, abated a little after the Silent Places Contest. But it is still true that our way of hearing or listening has changed a lot during modernisation, that Japanese Sound Culture has changed, and it is important for us to reinvoke our subconscious and conscious awareness of positive silence by means of such projects.

I would like to conclude with another of Schafer's statements: "We need to regard quietude in order that fewer sounds can intrude on it with pristine brilliance. The Indian mystic Kirpal Singh expresses this eloquently. The essence of sound is felt in both motion and silence... When there is no sound, it is said that there is no hearing, but that does not mean that hearing has lost its preparedness. Indeed, when there is no sound, hearing is most alert, and when there is sound, the hearing nature is least developed."

What Schafer is telling us here supports my contention that when we speak of Sound Culture we must consider silence as an important element in addition to sound itself. Furthermore, in today's world where the concept of a polar opposition between western and oriental ways of thinking is not necessarily valid, a newer, more flexible framework for the understanding of Sound Culture is necessary. The establishment of this new framework will lead to a new understanding more applicable to life in the contemporary societies of the Pacific Rim countries.

A Sound Culture

Martin Harrison

In the past, to fly required only the capacity to fall or, more exactly, the willingness to throw oneself from a tall place, a tower or a cliff-top. The pursuit of this capacity to fly forms a long history of desires and designs, even if the narratives have, in the main, often left readers with no more than a jumble of futile, often comic, renditions. Thus, for instance, we find that one of the last examples of this truly intrepid activity of throwing oneself into the air (supported perhaps by wings) concerns the Marquis de Bacqueville who, in 1742, launches himself from the roof of his Paris house in an attempt to fly across the Seine[1]. His trajectory is, inevitably, downwards. He arrives only so far as a passing barge where, landing abruptly, he breaks his leg.

Yet for the theorist of sound there is, in this instance, the specific fascination of falling, of being-in-the-air. This is so despite the fact that the historical version of the Marquis's experiment says little about the total form of movement involved in his attempt. The sound theorist, for one thing, might be no less interested in the various lateral motions which provide the hidden context for the action, namely, the seemingly unperturbed floating of the barge or the river Seine's sempiternal flowing. Unlike sound-theory, history (a history, that is, which has not yet privileged a sonic account of past moments) speaks preferentially only of a fearless, tragic and ultimately ridiculous kind of ending — that of a would-be 18th century aeronaut who has not yet understood that the business of getting-off-the-ground is not identical with a merely aerial delimiting of trajectories. Such history can only announce the subject, the person or individual as one who has already committed himself to a purposive line of flight. He is, for example, the pilot who sees before him a place of "arrival" (his place of arrival) which he can measure out and assess. In fact, where all balancing details have been deliberately omitted, the only reason for such literal historical trajectories is the desire to measure space.

This is not the kind of being-in-the-air with which the sound-theorist (and by extension a culture of sounds) is likely to be preoccupied. Within the theory of sound, to fall is, in a restricted sense, better than to fly. At least "falling" suggests the unattainability of those logically delimited moments of "arrival" and "destination." Unlike flying, to fall allows some scope for a more profound desire to hover in a space which is only partially referenced. This is a space where action itself (in the Marquis's case, the mere desire to "fly") determines the context of the environment and where other occurrences (barges, rivers) are not de-emphasised. This notion of "falling" reveals the degree to which the aeronautical will-to-flight almost automatically misses the mark. No-one needs to fly in order to be off-the-ground. One may simply fall, float, hover, listen.

All the same, the reference to the Marquis points to a plight, or paradox, which reaches into the heart of any definition of psychology of sound. For when we come to speak of experiences which require that we acknowledge an ungrounded element in them, there is always the difficulty of surrendering the unifying, self-guaranteeing "viewpoint" of the tragic individual and the purposive act. Not only are a "Marquis", a "Seine" or a "barge" demanded, there has to be energy enough for lift-off. Similarly, in thinking of a possible *culture* or set of underpinnings in which audition and sound-phenomena are given pre-eminent value, it is not just the limits of aerial trajectories which become apparent. There is the equally troubling prospect of the self's limits and of

the nominal position of subjecthood from whence and whither meanings are adduced: the boundary of "here" and "there." A sound-culture will deal with documents and technologies of those sorts of phenomena which are off-the-ground, literally in and of the air, in and beyond the boundaries of self. Their parabolas may not be those of flying but, in their uncertain philosophical and critical locale, the instability of discourses appropriate to their maintenance may make them no less severely and suddenly truncated. Here, then, are several risks. There is, for instance, the distinct possibility of losing oneself in neither a hovering nor a gravity-driven way, but of simply cutting-out (like a stalled motor) in a state of boundless, interpretive wonder to do with mystery, limitless sensitivity and deeper self-awareness. There is the no less real danger that we deal with phenomena which are constantly escaping over a subliminal threshold, leaving only the traces of their repeated disappearance: these are the traces which the psychoanalyst, the theologian and certain kinds of post-structuralist invoke. Finally, there is the tempting likelihood of an insistent philosophical recession into the creative dynamics of technique pure and simple, which is to say, into being content with describing the technologically-founded "experience" of flying or listening, together with all the multiple and complex histories of subjectivity which are involved in the human re-shaping of the mind via prosthetic, communicative media.

There are, it seems, few projects (literally: conceptual and not just aeronautical "throwings-forward") exclusive to a culture of sound, and to its appreciation and growth. It is as if the sound-theorist is constantly obliged to manipulate a subtle, often bottomless, economy of terms in order to isolate the instance to which sound pertains. This activity is less to do with reductive and specifying philosophical procedures — it is not to do with extracting *essences* — than it is to do with noting the relative simplicity and poverty of the visible, built elements which connect with the object, the matter, in question. This, of instance, is the appeal of many photographs of early bi-planes, of which there are hundreds of such classic portrayals of dromological means of getting off-the-ground. In one such photo we see that the plane does not follow its own freely-marked trajectory but a path already established by the nature of telephone message-transmission i.e., a sonic activity whose technology may be draped across the landscape in poles and wires, but whose messages as sound-events elide precisely that feature of distance which the plane literalistically seeks to overcome. Understood as a sound-event, we witness two transverse flows, one of real-time energy-expending engine-noise and the other an imaginary time of the telephone-voice. Neither of these events, these crucial moments within the culture of sound, have ever sought to get off the ground, nor do they assume any point of purchase on the notion of travel: they are already travelling instances within the air, laterally and poorly linked to complex substructures of wings, wires, goggles, spinning propellers, mouthpieces and dials. Both indeed might make us want to entertain a curious set of philosophical paradigms to do with deterioration, to do with the overhead, with contact and presence. In these regards, they share certain features with the instances which follow, central to a culture of sound: the psychology of dying, sublimation, broadcast technologies and a certain peripheral attitude to music.

Neither a sign nor a wonder, the dying woman's voice sounds in the mind, framed not as words but as presence. Sound in respect of this voice speaking is, in this instance,with willing acceptance of an unnatural presence, or an exemplary literalisation of it. There, in that place — and why is "place" so important in such moments of hallucination? — a dying person takes up a different, and entirely incontravertible, kind of address. As an extreme experience of inner audition, such sound-events are not uncommon moments within the many levels of subliminal distress which accompany death both before and long after it. A person about to die, though it might be in a different country, speaks directly heard by the beloved. A voice enters us, accompanies us.

Is this then simply another example of talking-in-the head? If there are similarities with that philosophically curious zone of "inner" heard language, this directly heard voice does not, in certain crucial aspects, conform to the customary pattern whereby thoughts are summoned into consciousness and made available as soundable, fully linguistic expression. For one thing, the accompanying voice, the voice of the dying person, arrives already fully formed. It comes from an "outside" already posited within the scope of "inner", self-consciously subjective space: it does not perform as any kind of realisation of thought-processes, pre-conscious intuitions or waywardly recalled memories. In that sense, this voice is not *summoned*, it is not a voice *made to speak* thoughts which have somehow been temporally presupposed as having-been-thought. Perhaps this is why such voices are, in our culture, regularly demoted to the realm of the irrational, the angelic and the passionate, as if their involuntary invocation merely results from pain, guilt or longing. Indeed, they pose a major problem to culturally and psychologically normative ideas about self-conscious individuality and purposive actions.

Yet if this voice cannot be summoned, then paradoxically it is not subject to what might be termed the temporal mismatch within the semantic bearing of everyday, "summoned up" talking-in-the-head of the "I said aloud to myself" or the "I thought about it awhile" varieties. When, for instance, we inwardly speak to ourselves, formulating a half-formed thought, there is an immediate

sense of displacement and prioritisation: the thoughts which were forming (in what sense could they ever be called *half-formed*?) acquire a "new" status of having-been-formed. Preconscious and premonitory moments of thinking seem to have somehow emerged into a more fully reclaimable i.e. manipulable, form as language. Accordingly, the presentiment of what we might have been about to formulate is forced into a prior position, a "pre"-position of *before* or *towards* or *on the way to*. There is a sense of actualisation, as if all formulations of inner thoughts as language are versions of an obscured thinking-process which now, i.e., illuminated as words from the viewpoint of the thinking subject, comes to seem as if it has pre-existed the actual words thought aloud. But how, in fact, do we establish what these supposed pre-thoughts were — other, that is, than by re-iterating their supposedly "after" formulation as soundable words? Is there, to put it bluntly, any continuity between this "before" and this "after"? To speak what is thought aloud carries with it, in short, a prohibitive relation to temporal lapse, since speaking aloud inner thoughts is to insist that one is giving the most authentic account of "What I *was* thinking." Interestingly, words often fail us at this point, as if the intersections between the various language-games of inner talking-in-the-head and outwardly addressed speaking-to-another-person are not always as strong as they might have been anticipated to be.

One encounters here that issue of the mind's solitary life in which language traditionally has been separated from any usefully signifying relation with so-called psychic acts. Husserl tells us that "words cannot serve for the function of signifying or notifying the existence of psychic acts, for a compatible indicator would be useless even though such acts are lived by us in the very moment. [2]

Wittgenstein, too, almost inadvertently states this element of temporal mismatch when trying to delimit the differences between experiencing a mental image and experiencing the meaning of a word:

The whole scheme presented itself to my mind in the flash and stayed there like that for five minutes." Why does this sound odd? One would like to think: what flashed on me and what stayed there in my mind can't have been the same.

I exclaimed, "Now I have it!" — a sudden start, and than I was able to set the scheme forth in detail. What is supposed to have stayed in this case? A picture, perhaps. But "Now I have it" did not mean, I have the picture.[3]

None of this, though, applies to the way the dying woman's voice is heard. This unsummoned voice does not require any later kind of realisation. It can, for instance, be repeated aloud (addressed-to-another-person) *verbatim*. It speaks in its own fully realised time, within the mind of the hearer, and to the degree that it can do so it is not an inchoate, semi-conscious or submerged element of subjective thinking. Likewise, to distinguish between kinds of experiencing, whether to do with "senses-of", images or words, seems irrelevant. These words heard are already representations (images) of a familiar presence.

Must we then speak of unsummoned voices as somehow inhabiting a place or possessed of an extra-natural kind of being? Do we, in other words, need to constitute an area of "disembodiment" whence these voices arise and in which they seemingly exist, albeit auditorily perceived within the privacy of a particular listening? Historically speaking, it is interesting that technologies of the voice have often been theorised within such ghostly domains, both in the early period of radio research and more latterly in some post-modernist critiques of sound.[4] Again, however, it is the lateral and impoverished link of the matter in question with its substructures which is remarkable about the culture of sounds. The voice of a dying person is an occurrence, an event, which does not happen outside of a given situation i.e. other events occurring in the world such as the particularity of a specific person's death. What the example marks most clearly, is the presence of the "other" (the absent, the dead one) within a subjectively unclosed communicative form of sound — namely, that non-closure which not only elides distance but also abolishes the very idea that distance implies a temporal passage "across" it.

Sound is present in the moment it is heard. Language's sound is no different: it is present when it is spoken, when it is heard. Here, to be sure, one is not talking of what language refers to, its meanings, its references, but only its sound. Nor is that sound automatically "speech" or a "speaking" of sound, though it is an emission and an audition. It is not necessarily language's sound either: this sound is simply a sound here, or a sound from there.

Why then maintain the claim that this kind of audition has anything to do with language at all? At the very least, however, such a referencing within the context of language may be defended on tactical grounds because it is a way of measuring something which escapes from the conventional conceptualisation of language and which starts a further order of complexity. Here, what is encountered is a seemingly maximum level of mobility within sounds. For this sounding of language is reduced to a series of semantic marks and supposedly total or totally integrated language is invested which can be subjected to the regime of already written and pre-disposed meaning-constructions. It is as if according to this philosophical account language is always conceived initially as completely smooth, made up of essentially the same substance and lacking striation, gap or internal hierarchy.

For one does not want somehow to extract sound from lan-

guage, perhaps thereby instituting a return to a neo-classical model by which sound is conceived as the drapery of meaning. Rather, it must be pointed out that language, however integrated as an activity, addresses different kinds modality and is possessed of different sorts of ontological status. Language is sound, meaning, reference, behaviour, sign: these things mutually hold together, but they foreground different aspects of the world and different sorts of human perception and activity. Within 20th Century linguistics, for instance, the area of sound we are here concerned with has been treated mainly as the province of poetics as if it dealt only with associative or nuanced types of access to meaning-production — much at the level of homonym, word-association, parallelisms of various kinds and rhyme. Thus, language's sound has been segregated off within a rhetorical schema as an area additional to meaning, namely the area of expression, feeling, intonation and cadence. Many structural linguists, particularly those concerned with phonology, have of course wished to maintain an integrated version of this linguistic manifold in order to understand the complex interaction of phoneme, performative characteristics and meaning-discrimination. Quite properly, they have wished to maintain a certain singularity within the object under consideration. Yet the regime of already predisposed meaning-construction is no less strongly felt there than in more frankly rhetorical approaches. What has resulted is the almost inevitable de-emphasising of precisely those differences which exist between the written, visual form of language and (it must be phrased carefully) the acoustic context for its being heard. To pick up debates here to do with differences between the written and phonic, the scriptive and the declarative models of language-analysis is to miss the point. This major post-structuralist polemic does not focus on the differences between the written and an auditory, contextual understanding of language: by concentrating on differences between a written and speaking model of language, i.e., between two approaches which, unlike the matter of hearing, both equally submit language-sound to that regime of already disposed meaning, the acoustic bearing of language is never fully explored.

It might be then that we are less concerned with a utopic account of language-sound which transcends the boundaries marked by the relations between phoneme and reference than with a series of alternative "listenings" to language's sound. What Roland Barthes called the "rustle" of language,[5] its well-oiled and machined performativeness occurring somehow on the other side of its local transactions as meaning and reference, exists less as a category of sound emitted, than as a category of low-down hearing, of a hearing which is willing to surrender certain key discriminations for making sense. For Barthes, that "rustle" is a utopic other, an ideal once we have reconcevied the entire linguistic enterprise under a half-articulated category of music or indeed certain kinds of radiophonic sound-art. (It is interesting to reflect, in this regard, that Barthes' key example of "rustling" is taken from the soundtrack of a movie, which is to say from a technologically-composed, musicated type of sound). Unlike Barthes, we are talking less about a beyond or an "other" side of language ("meaning ..... would however be posited in the distance like a mirage") than about a particular refinement in our hearing which allows us to admit the blending of all language-sound with its contextual sounds and with timbres which are acoustically modified in different atmospheres and resonances. This refined category of audition is one which acknowledges how language-sound shares the same conductive medium as all other sounds and combines with that medium's properties at any give temporal moment. The rustle or murmuring which we are interested in occurs not in the mouth nor as an aggregate of any vocal sounds — it is not a case of Barthes' multiple readings-aloud – but as a feature of a murmuring which runs through all sounds no less than through language. It occurs, that is to say, in the ear

Nor is this refined hearing merely to do with resonance or interference. To *refine hearing is to stand back from sounds or, better, to stand by them.* This hearing hears them not just as spatial and temporal occurrences but hears also their disappearances, their merging into sense and away from sense. Thus, the voice at the door is a feature of the wind-noise, the bird-sound, the resonance of the hallway and the interchange of stumbles, difficulties, incoherencies which constitute the language's sound. More particularly, however, this refined hearing addresses what might be termed the cantilever, the moment of span, between a here and a there conceived both as a historical succession in time and as a matter of source-point and topographical referencing. Within the larger set of contours which define language's sound (the atmosphere, the contextual sounds and so on) there is a cantilevering which makes certain sounds link up, speak successively and hold in the memory. Sounds do not, in this regard, merely come into existence in front of us — carrying with them the recurrent sign of "being-here" — but also offer different aspects of their coming-into-the-front-of us, different trajectories of physical inter-relation and temporal weight, speed and gravity. Elements within hearing, they are situated but only if you appreciate that the very idea of "sound" (I hear a sound) participates as a constitutive moment in their being-situated.

This is why the attempt to consider sound as a sign never really works. One ends up simply bypassing sound by reducing each sound to a "name" of a thing. True, a semiotic approach can countenance the possible existence of a sound-object but, having

done so, must then re-define it by reference to the sound's source. Semiotics imposes a permanent state of *musique concrete* into the world. Sounds, as Christian Metz points out,[6] then take on the characteristics of being predicates and, worse, vague descriptive qualities which are supposedly secondary to the name of their source-point. Borrowing Metz's example, we speak of the lapping of the water, since "lapping" does not in itself specify sufficiently what is being hear. And once a sound has been reduced to this predicative, secondary level, we not unreasonably start nominating a sound as "water", "the lake", "the wavelets", in preference to any more strictly sonic area of definition. The sound's cause — or, rather, the thing of which it is an indicator — substitutes as a primary category of certainty and solidity over (or perhaps, more correctly, under and beyond) the phenomenon of sound itself. We may become interested in cases where there is a kind of onomatopoeic symmetry between sounds and the names of their sources — "lapping" is just such an instance — but this symmetry does no more than point to the degree to which definitional categories which relate to meaning can be extended to the phonic material of language, namely its sound. To say that there are seeming similarities between the recurrent movement of water on a lake shore and the sounds of the word "lapping", even perhaps to experience a liquidity linking both word-sound and an auditive impression of small wavelets, is merely to extend the regime of the name. We have done no more than, once again, insist that the taxonomies of things are the primary taxonomies of sounds. What, for example, of the "lapping" of a cat over its milk? This is hardly the same liquidity, the same recurrence, as that of water. And what of the "lapping", which is a furnace's insulatory casing, or the "lapping" which refers to industrial processes in grinding and polishing? Metz's attempt to find a set of commutations between this word and its aural object reveals only the essentially possessive nature of names: names take over. The little word "of" (the sound *of* the water, the noise *of* the cat) implies a closeness between source and sound which is only sometimes accurate, only sometimes requisite or invocable. By virtue of this letter "of" we can speak about sounds, but it is not necessarily what we hear. We can reduce sounds to a linguistic model (such as semiotics is) but this is all that has occurred: the sounds escape, they seem to spill over outside the nominal geometry of the system. We continue to hear them, as if subliminally, breaking on another surface, *lapping* there.

Nor does hearing necessarily require in any straightforward sense an auditory event, a "sound". The prompt of graphic marks, for instance, allows us to invoke sounds which have not, to put it strictly, been*spoken*. This is not only a reference to printed language but also to the graphics of, say, certain photographs (a face animatedly talking, the sound of wind in a photograph of balloonists scaling snow-capped peaks and so on). A grapheme psychoacoustically invokes and recalls sounds. Similarly, physical motion — but this should not be limited to kinesics, codified signal-systems envisaged from the viewer's position like handwaves, glances, body postures — constantly allows for a space to be cleared in which auditory moments are priviledged without ever becoming "sounds".

Focussing on the still body, the silent cinematic moment or the remembered image of human motion demands a more attenuated kind of hearing which links in with both sub-vocal awarenesses of language and more threshold senses of hearing. To settle attention on any object is to let a less differentiated kind of hearing enter the world. But then other ordinary, unfocussed actions like walking, swimming, turning around clear similar spaces. For the sounds which we hear are not, as is customarily assumed, the consequences of some kind of addressive, communicative system as if they are missiles deliberately steered on specific auditory closed down at will, and as the subject inclines towards or away from certain spaces for hearing, the sound heard will shift accordingly.

What then of a culture of sounds, a culture in which the supremacy of that communicative/transmissive model for sound is undermined? Most sounds, including many aspects of language-sound, do not behave like language. Nor do sounds as systems conform to the conventional transmissive account of communication. Instead, we deal with a phenomenon which, though it performs in a way which links source-point to referent, does not even fully conform to the indexical model of the sign seemingly suggested by that link — save at the most abstract level in which we might, like pointing something out, say "There, over there, is a sound!" Here the search will begin for its name, its cause. Yet as soon as we wish to specify beyond this most abstract of levels, the tight set of relations which inhere within the index has to be loosened up: the same sound may stand as evidence of the presence of numerous, even contradictory things and sometimes of no easily definable thing at all.

Unlike Barthes' "rustle", this hearing then is not utopic, it is not the hearing of no-place, nowhere. For no matter how it may link in with subliminal sound (sounds-about-to-be, sounds-being-discovered, sounds-already-going), the question of its site (its topos) is critical. Whether we deal with sound as some sort of naturally occurring phenomenon (when, indeed, is it ever not just that?) or whether we consider the technologisation of sound in broadcast, recording and film-sound, the nature of context, auditory space and orientation must be brought into play.

To think of technologised sound — saved, stored and re-dis-

tributed sound — is to be immediately confronted by the way the materiality of sound has been re-organised through a sign-laden system of representation. Within radio, for instance, all sounds become representations of themselves: here, the indexical, evidencing relation between sound and referent is certainly tightened up. Thus, stereophonic auditory space becomes a representation, a design, of binaural moving space. Music becomes a broadcast, a record, a sample. Radio deals out a fully textualised account of sound and a fully composed set of practices which distribute only some kinds of hearings and not others. As radio's history from the 1920s onwards demonstrates, new kinds of technologically competent hearing have to be reconstructed culturally and acoustically under the figure of the "listener". The "listener" circa 1922 is not the "listener" circa 1992, yet this refers to much more than styles, social occasions and different technologies: what "listening" connotes, how it is segmented within a broader range of late 20th Century hearing, has also been modified and reconstructed. Sporadic, wandering hearing which picks up and puts down sounds, in and out of aural focus, has been re-distributed through logistical field of hearing within, say, domestic spaces, dance-forms, the car or in moments when radio is overheard in streets, shops and cafes decade by decade.

Technologised sound, however, is sound switched on, sound controlled from a distribution-point outside the subject's own space. In this regard, it resembles the sound of the dead person's voice which incontravertibly arrives fully formed. Its liberatory path is always a channel, whose capacity to reach to an "outside" is dubious and unstable. That is to say, we listen to a systemic sound whose capacity to replicate itself depends on bifurcations and hybridisations of the intersection between storage and transmission in data-bases, digital recording, conferencing processes and the audio-visual interlinking of computer VDTs. There is no clearly felt exterior to this electronic street: sound circulates within an indoors form of technicalisation, exemplified most strongly in sampling where what "speaks" is a systemic potential of one part of the storage system to quote another and, thereby, modify the data transmitted.

These sounds do not need to have firmly felt contours even as musical sound-events, because boundaries no longer have clear authorships, nor stable formats. Sounds glide together and nothing in this apparently seamless capacity to harmonise disparate elements constitutes a possible interval in which we might discover a sound "in-between". Technologised sound becomes more and more etched as a materiality, bearing its own marks as to shape, binaural mapping, selectivity in terms of artificial memory, and touch-sensitive to visual access.

What then is the topos, the auditory place, of this and similar kinds of sound? we can, for instance, insist on the inscriptive nature of communications technologies and the literalistically mediatised nature of the informatic street: a composition merely switches on and inhabits us, fragmenting a sense of subjective space into an externally driven media pulse. Nostalgic criticism laments this refinement and the way in which the human voice in particular no longer addresses but is stored in voicemail systems and voice-activated microchips, or the way that this new interactive airway no longer permits even the density of an electromagnetic mark. And in truth, what could be more brutal than a culture of sounds inhabiting consumers so literal-minded that they would merely turn this nostalgia on its head, making celebration out of critical regret? To do so is to fail to recognise a dependency on storage formats and, worse, it leads to a submissive rejoicing in the sheer unlivability of message-laden systemics (Historically speaking, Nazism might be mentioned here). In such a context, listening increases enormously, the sheer burden of listening — in which the topos of sound is wrap-around auditory overload.

The current hybridisation of technologised sound has about it a hidden transience. Technical formats may quote one another, but they also outdate each other and pass on, leaving a constant trail of after-effects, periodisations, modes and moods. (Sometimes this may be the only means of explaining the provenance of so-called "new" musics.) For no matter what degree of homogeneity each fresh materialisation of sound achieves, all such systems ultimately have to take up a position in relation to a ground, a space, for hearing. The pulse's pure form (even the tones of the pulse-tone telephone) re-enters the air, blurring, channeled, returned to subjective hearing and to a relation with language. If technologisation and transmission ask us to tighten up the link of indexicality within the sound-as-sign, then this is not the total story of the way in which sound behaves, changes and re-positions itself in the subject's capacity to make meaning from it: we involuntarily discover paths by which we can, beneath the breath, hear what is occurring. The perfect textuality of stored, transmissive sound rapidly appears to be an ideal level of fixity which only the scriptive system possesses and which can only be accessed by writerly, rather than auditory, practices: the 1960s razor-blade, the 1980's button, Rameau's vertical scales, the studio's keyboard, digital manipulation and so on.

The conglomerateness, the stripped-away and economic interfacing, of this graphic ordering of sound is at odds with a much more necessary level of dispersedness and unclosedness. This homogeneous material asserts too many contextual relations for comfort. Perhaps this is why, at a purely practical level, the sculptural forms which sound-objects take — the arrangement of wires and machines, other designed aspects of space — take on

such a scattered air. When this invisible matter is finally visibilised as mast, antenna, carefully positioned monitors and microphones, wires, hard disc stacks, performance areas etc., it is soon revealed that systems which should not fit together are, curiously enough, linkable. Once more, the sounds heard come to have only the poorest, most lateral relation with a technique's actual equipment. These dispersed, firm-footed machines-objects which body forth hearing, acquire a specifically temporal aspect quite contrary to the purposive mode of, for instance, the automobile, the aeroplane, the assembly-line or the highway. Like trees in a forest, the objects which form a sonic technology express no trajectory. They sprout, they lean towards a certain direction, they piggyback on artificial stars, they spin around like sensitive nests awaiting the landing of multi-directional birds. They seem either too large or too small for the auditory space which they zone and the degree of communal attention which they attract. Signal pathways which run through them all too evidently become hidden, disappearing like a flowing creek beneath a rock-face of micro-technology. It is the oddity of this hearing-zone when it is visibilised which first and foremost strikes the eye, as if we deal with dreams where the purpose of dreaming is exclusively to disperse the matter of the specific dream into openly articulated spaces which have neither wires, microchips nor antennae. That dream's homogeneity disperses, its materialisation guaranteed only by a knowledge of the technology. But his knowledge itself ultimately comes to seem additional and conditional i.e. another kind of dispersal.

Dispersal: which is another way to express that lateral and provisional linkage of sound to its structures — a scattering or falling-apart in many directions. Trying to imagine that fall — sky-diving or bungee-jumping — the problem remains one of location. That fall is a plummet, a narrow line of falling, all too compact no matter how the arms and legs my be flung from side to side, whereas the fall we are concerned with its multiple, multi-temporal. Even more inappropriately for our purposes, the directional, compact fall will always slow down as the parachute opens or the rope unfurls to its limit: it is completely dependent on (it hangs from) its structure. Only an accident, a tragedy, could tear the fall apart from its purposive format. We might, for example, meet the river flowing beneath our already submerged feet.

Such is dispersal's fable, its fabulous telling. What must be recognised however, is that dispersal is not increase: no greater quantity is materialised through a scattering, multi-directional effort, though the area covered (the zone in which heard sound is located) may from some viewpoints be enlarged. Only projective accounts of sound — principally those that are modelled on an addressive account of speech-sound-load this scattering with a quantitative increase of "message", energy, complexity, depth or distance overcome. This projective account of sound is, in this way, constantly equivocating between amplification and application i.e. between uses which require the partial scripting and materialising of a sonic matter. Once compacted, sound is stored for transmission between delimited places or between clearly defined time-zones. Sounds are spoken. Or they are played as music, namely, stored for transmission into alternative, more stabilised areas of temporality like rhythm, harmonies, repeating cellular structures and so on. A sound-culture will, quite contrary to these accumulative procedures, treat dispersal as a moment of refinement, ingenious loss and simplification.

What does it mean to live in a culture where sounds and the practices to do with the phenomenon of sound are privileged? A single example must suffice. It is to do with how we approach the drop or the fall. It is to do with how everyone pauses before a great height, tentatively peering over to study its depths and measuring the imaginary line of negative flight from here to there, from here on a niche or shelf above the fall to the "there" (it must only be supposed, because we have not yet got there) of impact and death. No-one simply launches off, conscious of a future capacity to move floatingly and be at one with a groundless medium. Even the Marquis, scion of a great tradition of experimentalists, prepared himself with unnecessary wings before picking up speed along the tiles of his house. In short, projective devices are essential if we are to literalise the space which surrounds each acoustic phenomenon, for we must somehow mark the discrepancy between each sound and environing atmosphere, as if we impose a silence there which is tantamount to the death of sound. Of course, if we could float, we would rapidly understand that no sound, in fact, behaves in this way, for its continuous vitality is to merge back into non-silence, into an environing noise of other becoming-sound. Yet when we approach that fall, that moment of throwing ourselves out into a space where both causes and effects are etched simultaneously, we pause for thought and explore the systems available for our survival and self-maintenance.

1 Quoted in John Chaplin, *Wings in Space*, London: Ian Allen, 1979.

2 Edmund Husserl, *Logische Untersuchungen*, Halle: Niemeyer, 1913-21.

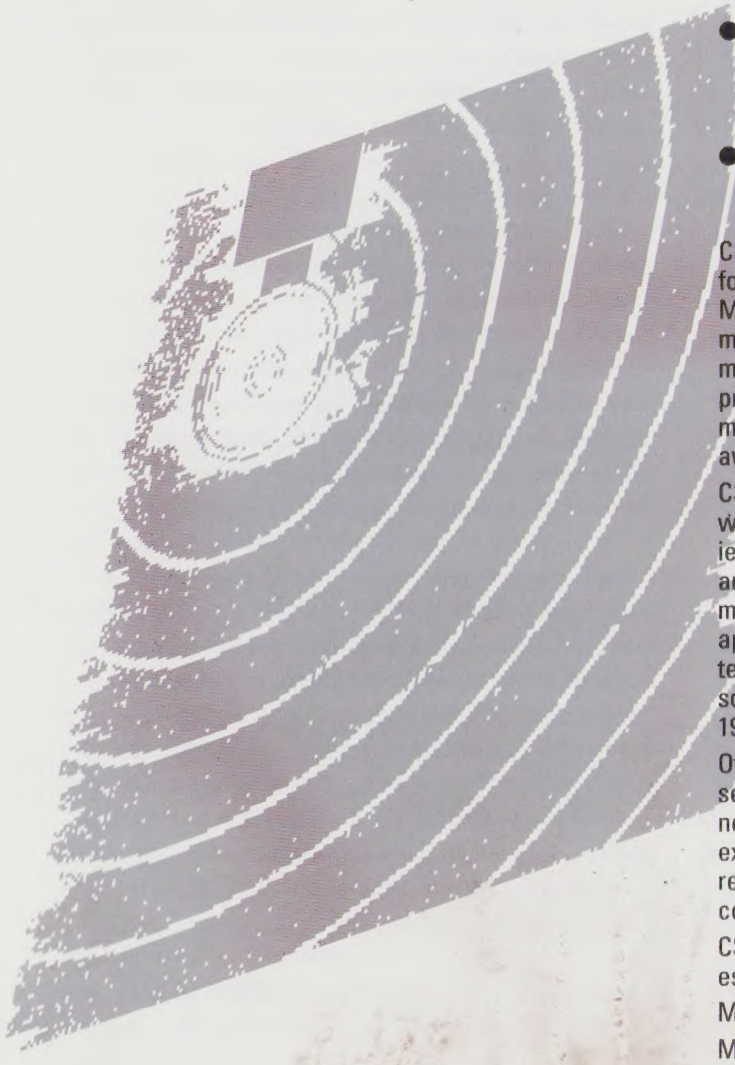
3 Ludwig Wittgenstein, *Philosophical Investigations*, Oxford: Basil Blackwell, 1958, p. 176e.

4 Principia Schizophonica, Art & Text 37, September 1990, Sydney.

5 Roland Barthes, The *Rustle of Language*, New York: Hill and Wang, 1986.

6 Christian Metz, *The Aural Object*, Yale French Studies, 60, 1980.

CONTEMPORARY SOUND ARTS



Contemporary Sound Arts is an independent arts organisation which was established in early 1992 with the following objectives:

- To create and promote a facility for critique, analysis, research and production in the area of sound and to encourage and promote debate amongst theorists/practitioners.
- To facilitate an interdisciplinary approach to the critical investigation of sound encompassing historical, political, philosophical, artistic, sociological and technological perspectives.
- To engage in and support research and the production and distribution of various forms of print and electronic media in sound related areas.

CSA's first project has been the organisation of the performance by the French sound poet Henri Chopin at the Museum of Contemporary Art in Sydney. His performance at the MCA featured his work in three movements, *Glissandos pour voix unique*, consisting of pre–recorded tapes, real–time montages and live microphoned sound, together with a screening of his award winning 1962 film *Pêche de Nuit*.

CSA's second project is a publication comprising a wide variety of theoretical approaches to sound studies: sound and architectural space; sound in film and animation; histories of avant–garde musical movements; phenomenological and deconstructionist approaches to sound; sound and miniaturisation of technologies; and interviews with composers and sound poets. The projected date of publication is late 1992.

Other projects which CSA intends to initiate are a series of radio broadcasts and the publication of a newsletter incorporating information on sound–related exhibitions, lectures and courses, publication, events, recordings and broadcasts as well as short articles and contact information.

CSA welcomes correspondence, expressions of interest and proposals for sound–related projects.

Membership:

Membership fees are $50 for institutions, $20 for individuals and $10 for students/unemployed a year.

The benefits of membership of CSA are:

- Receipt of the CSA newsletter.
- An invitation to all CSA forums, seminars, performances and other events.
- A 30% discount admission fee to CSA activities.
- A 30% discount on all CSA publications and journals (including print and electronic media).

For further information about current projects, future proposals, or membership, contact CSA on [02] 516 2122 or [02] 360 3960.

Postal Address: PO Box 1265 Darlinghurst NSW 2010 Australia
Office: 64 Newman Street, Newtown
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Fax: [02] 516 3568
e-mail: contempa@peg.pegasus.oz.au

MEMBERSHIP OF
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Membership of The Performance Space Ltd. is available to the public. If you would like full information on our programs, including the gallery, theatre, media and education programs and reduced ticket prices for all shows please send us your personal details and a cheque. We'll send you our bi-monthly program brochure, invitations to gallery openings and special performances, programs and catalogues for our conferences and festivals, and notices regarding our Annual General Meetings and other special events.

As a member of The Performance Space you can support the development of contemporary art through the 'nineties. We welcome your interest and participation. Just fill in the form below and send it to us at The Performance Space, PO Box 419 Strawberry Hills, 2012.

THE PERFORMANCE SPACE
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Membership rates per year	Individuals:	$25.00
	Individual Concession:	
	(ie. full time student; unemployed, pensioner)	$10.00
	Institutions:	$50.00

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sound cultures

Audio Arts in Japan
Toshie Kakinuma

The Work of Alvin Curran
Stephen Lowy

6th Australian Video Festival
Gabrielle Finnane

Vibration, Inscription, Mostly Transmission
Douglas Kahn

About Reduced Hearing
Ashley Scott

Automata
Paul Charlier

Neremia Silent Places Contest
Keiko Torigoe

A Sound Culture
Martin Harrison